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Private Saving in Mexico, 1980-90

Patricio Arrau
and
Daniel Oks

By conventional measures, private saving declined sharply in Mexico in 1987-90. The picture changes when data are corrected. The smaller decline in private saving that results is due mostly to a reduction in private interest income from domestic and foreign assets.

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This paper — a joint product of the Debt and International Finance Division, International Economics Department, and Country Operations Division, Country Department I, Latin America and the Caribbean — is part of a larger effort in the Bank to identify external and internal factors that affect savings and investment in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 31047. (February 1992, 47 pages).

Between 1987 and 1990, Mexico's current account and trade balance deteriorated by more than US$10 billion. Higher investment accounts only partly for this deterioration; nor can it be attributed to the public sector. By conventional (unadjusted) measures of private saving — the total investment not financed by public or foreign savings — private saving did decline sharply between 1987 and 1990.

But that diagnosis does not hold true when private, public, and foreign savings are corrected (as they are here) to account for shifts in portfolio composition from foreign to domestic assets, for the effects of inflation on foreign and domestic interest income (the inflation tax), for fluctuations in the real exchange rate, and for other factors.

Arrau and Oks provide more information about the components of private saving than most studies do, addressing such questions as the following: Is consumption more important than disposable income in explaining changes in private saving? What components of consumption and disposable income matter the most? If, for example, the bulk of consumption growth is accounted for by durable consumption in the wake of trade liberalization, the measured decline in private saving need not be cause for concern as it would be for a once-and-for-all stock adjustment in durable goods. On the other hand, if the main factor behind the recent decline in private saving is disposable income (rather than consumption), it is useful to identify which component of disposable income accounts for the decline. If, for example, the decline in disposable income stems from a reduction in the domestic public debt service, there may be less cause for concern than if it stems from non-interest income.

The following are among the conclusions of Arrau and Oks:

- When conventional measures of private saving are corrected, the recent decline in private saving appears less important than it did before.

- Most variations in private saving between 1980 and 1990 are ascribable to fluctuations in disposable income. Disposable income fluctuated considerably more than did private consumption.

- The sharp drop in private saving in 1990 was prompted primarily by a decline in disposable income and, less so, by fast-growing consumption.

- Only a quarter of the increase in consumption in 1988-90 was attributable to increased consumption of durables — which grew almost three times faster than consumption of other items but represents only a small share (about 11 percent) of total consumption.

- Fluctuations in the real exchange rate played an important role in the evolution of public saving because that exchange rate influences the real interest service on foreign debt. Real peso devaluations in 1982 and 1985-86 hurt public finances and real peso appreciation later helped them. Strong real peso appreciation in 1988 and, to a lesser extent, in 1990 reduced real income from private foreign assets, reducing private saving in those years.

PRIVATE SAVING IN MEXICO, 1980-90

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1. Motivation and Summary

Between 1987 and 1990 Mexico's current account/trade balance deteriorated more than US$ 10 billion. The extent to which this deterioration is worrisome hinges, of course, on the underlying factors. If it was prompted by a surge in investment there need be no big cause for concern as the trade deterioration could then be regarded as temporary. The evidence indeed shows that, despite the severe cutbacks in public investment, there was a sizable surge in fixed investment in the last three years, particularly in 1990 when fixed investment was up 13.5% in real terms compared to the 1989 level, or 28% above the 1987 level. However, higher investment only accounts partially for the recent current account deterioration. The current account deterioration cannot be ascribed to the public sector. Nominal public saving rose more than enough to finance increased investment implying that the entire current account deterioration could be ascribed to declining private saving. The conventional or unadjusted measure of private saving, i.e., the portion of aggregate investment not financed by public or foreign saving, has in fact declined sharply between 1987 and 1990. [1]

However, when properly measuring private, public and foreign saving, the above diagnosis no longer holds. Private saving in 1990 was actually higher than in 1987 and public saving lower. And although recently both the conventional and proposed measures of private saving move in the same direction, i.e., a sharp decline in 1990, the conventional measure alarmingly shows a private saving-GDP ratio at its lowest level since 1981 while the proposed measure of private saving reveals that in 1990 the ratio was just below the decade's average.

In this paper we compute series of private saving which incorporate a variety of corrections usually not considered in conventional measures. The main objective is to provide an accurate measure of private saving and its components. One key measurement problem is the measurement of income from foreign assets, which is usually misrepresented in the official current account of Mexico. We employ estimates of income from foreign assets which increase the measure of disposable income by almost 2 percentage points of GDP. The proposed private saving measure fully captures the impact of the recent shift in portfolio composition from foreign to domestic assets on private agent's income structure.

Another key measurement issue is the adjustment of foreign and domestic interest payments for inflation. In a high inflation country as Mexico this adjustment is more than relevant. For example, the inflation component of the domestic public interest service alone represented more than 20 percentage points of GDP in 1987. And the inflation tax on base money, although partly compensated by interest payments on commercial banks deposits at the central bank, shrunk from arond 7% of GDP in 1982 to about 1% in 1989-90. In turn, the inflationary adjustment of foreign debt service and on income from foreign private assets permits measuring accurately the impact of the recent real peso appreciation over the foreign debt service burden and real income from foreign assets.

Several other important measurement issues are discussed. For example, to ensure consistency with national accounts data those items of the balance of payments and fiscal accounts which were available as national accounts data

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[1] The conventional measure is derived directly from national accounts as the difference between disposable income and consumption. However, as we show in section 2 it is equivalent, once data consistency is ensured, to the portion of aggregate investment not financed by public or foreign saving.

were employed, e.g., the trade balance and current government expenditure. In particular, the current government expenditure measure from national accounts tends to be larger than the fiscal accounts measure because the latter computes purchases of military equipment as investment whereas the former doesn't. Further consistency problems arise because the fiscal accounts measure of public investment are used as fiscal accounts treats purchases of assets as investment whereas national accounts properly considers these purchases below the line of financing.

A useful feature of our study is that it provides information about private saving components. Is consumption more important than disposable income to explain changes in private saving? And what components of consumption/disposable income matter most? If, for example, the bulk of consumption growth is accounted for by durable consumption in the wake of trade liberalization, the measured decline in private saving need not be cause for concern as it would be a once-and-for-all stock-adjustment in durable goods. On the other hand, if the main factor behind the recent decline in private saving is disposable income (rather than consumption) it is useful to identify which component of disposable income accounts for the decline. If, for example, the decline in disposable income stems from a reduction in the domestic public debt service, there may be less cause for concern than if it stems from non-interest income.

Several conclusions can be extracted from revised measurements.

(i) Due to the inflation-adjustment of domestic and foreign interest income and the inclusion of the inflation tax in our measure the conventional private saving measure is systematically higher than the one proposed. The patterns of private saving suggested by the two measures is also qualitatively different. In particular, the recent decline in private saving appears relatively less important than conventional measures of private saving suggest.

(ii) Most of the variability of private saving over the 1980-90 period is ascribable to fluctuations of disposable income, i.e., disposable income fluctuated considerably more than private consumption. In turn, most of the fluctuation of disposable income represents transfers between public and private sectors which account for much of the complementarity observed between public and private saving rates. Public saving performance was strongly influenced by external events such as the 1981-82 debt crisis and the 1985-86 oil crisis.

(iii) In particular, the sharp drop in private saving observed in 1990 was prompted primarily by the decline in disposable income and, to a lesser extent, by fast growing consumption. The decline in disposable income was explained by a sharp drop in the real domestic public debt service and, to a lesser degree, by a reduction in real income from foreign assets (which, in turn, stemmed from lower external interest rates and real peso appreciation). However, the 1990 drop in public debt service was preceded by a bigger increase in 1988-89 so that disposable income (and private saving) in 1990 was still substantially above the 1987 level. Another important factor behind the upward trend in disposable income prior to 1990 was the sharp drop in the inflation tax.

(iv) Only one-quarter of the increase in consumption in 1988-90 was due to the increase in durable consumption which, nevertheless, grew almost three times faster than the other consumption items. The reason is that durable consumption represents a small share of total consumption: about 11%.

(v) Fluctuations in the real exchange rate played an important role in the evolution of public saving, by influencing the real interest service on foreign debt, and of private saving, by influencing income from foreign

assets. In particular, the real peso devaluations in 1982 and in 1985-86 exerted an adverse impact on public finances while the subsequent real peso appreciation exerted the opposite effect thereafter. The impact of real exchange rate fluctuations on private saving increased during the decade along with the growth in the stock of private foreign assets. As a consequence, the strong real peso appreciation in 1988 and, to a lesser extent, in 1990 reduced real income from private foreign assets lowering private saving in those years. As estimated income from foreign private assets has come close to interest on foreign debt real exchange rate fluctuations will tend to have a neutral impact on domestic saving.

(vi) Finally, a very important sub-product of our study is to make available good quality series on consumption data, both quarterly and monthly. Consumption series are in great scarcity in LDC's; and the series provided here for Mexico are not available from any other developing country. We include extensive appendices with information on national account methodology in Mexico and with disaggregated series of consumption.

2. Methodological Issues and Measurement Problems

In subsection 2.1 we present the general framework to compute private saving. In subsection 2.2 we discuss several measurement problems associated to the computation. The measurement problems arise from the three sources of data employed: the balance of payments, the fiscal accounts and the national accounts. In subsection 2.3 we discuss the role of durable consumption in the measure of private saving. Data sources and calculation procedures are presented in subsection 2.4.

2.1 Methodological Issues

We start from the traditional macroeconomic identity:

$$Y = C + G + I + X - M \qquad (1)$$

where Y is GDP, C is private consumption, G is government consumption, I is gross investment (both public investment, I_{pu}, and private investment, I_{pr}; where private investment includes foreign investment), and X - M is net exports of goods and non-factor services.

By adding and rearranging terms, the identity can be expressed as

$$\begin{aligned} I_{pr} + I_{pu} = {} & (Y - NFS + rB + iF - iD_{pr} - T - OR - C - \pi * BM) && \text{Private Saving} \\ & + (T + \pi * BM - OR - G - rB - iD_{pu}) && \text{Public Saving} \\ & + (M - X + iD_{pr} + iD_{pu} - iF + NFS) && \text{Foreign Saving} \end{aligned} \qquad (2)$$

where the added terms are:

- rB: income from claims against the government (real interest rate times stock of national or domestic debt)
- iF: income from private assets held abroad (real foreign interest rate times stock of assets held abroad)
- T: direct and indirect taxes

OR: other government revenues (transfers from public enterprises, etc.)
iDpu: interest payments for net external public debt (stock of external public debt less official reserves/assets times real foreign interest rate)
iDpr: interest payments on external private debt (stock of external private debt times real foreign interest rate)
NFS: net other factor services including workers' remittances and profit remittances (workers' remittances from Mexicans abroad reduces NFS, while profit remittances from foreign companies in Mexico increases NFS). In this measure we also include all other current account items not included elsewhere (e.g. transfers from abroad, etc.)
$\pi^*\Delta M$: inflation tax (net of interest paid by central bank on commercial bank deposits)

As we can see from identity (2) there are two ways of computing private saving. First, we can compute private saving directly by subtracting private consumption from disposable income, i.e., the first parenthesis on the right hand side of (2). Second, we can compute private saving indirectly as the difference between aggregate investment and the sum of public saving and foreign saving (current account deficit). Both measures would be identical if we use in identity (2) the same items from national accounts from identity (1). However, it is common to compute private saving using the indirect measure using implicitly the government budget definition for G as well as the balance of payments figures for X-M (trade balance of goods and non-factor services). The convenience of the indirect procedure is that the items of the disposable income series in the first parenthesis in the right hand side of identity (2) do not have to be computed explicitly. The inconvenience stems precisely from the fact that fiscal accounts and national accounts use incompatible definitions of current and capital expenditures.

2.2 Measurement Problems.

The three sources of data required for identity (2) are the balance of payments, the government budget and the national accounts. Several specific measurement problems associated to these sources are discussed in turn. We close the section with a discussion of the role of durable consumption in a measure of private saving.

2.2.1 Balance of Payments Data.

The official current account balance does not adequately measure real national financial dissaving in Mexico for at least four reasons: i) the measurement of income from foreign assets is not based on a comprehensive measure of the stock of foreign assets; ii) the official methodology employed to calculate worker's remittances until 1988 underestimates remittances; iii) capital gains induced by inflation are neglected; and iv) the difference in statistical basis between balance of payments data and national accounts data, e.g., the national accounts implicitly converts foreign currency units into domestic currency units at a trade-weighted exchange rate. In order to obtain a current account balance which would allow us to estimate private saving properly we deal in turn with factors i) to iii; factor iv) is discussed in sections 2.2.3 and 2.4.

Other possible sources of inadequate current account measurement not

dealt with here are trade misinvoicing and capital gains derived from cross-currency fluctuations. Although data on trade misinvoicing was available coverage was incomplete and some numbers appeared doubtful. On the other hand, capital gains/losses from cross-currency fluctuations could only have been calculated for foreign debt as the currency composition of private foreign assets is unknown.

i) Income from Foreign Assets.

Income from private foreign assets requires knowledge of the stock of wealth held by domestic residents abroad. A direct measurement of this stock is unavailable except for deposits of Mexicans in foreign banks. This is clearly incomplete as it does not measure bond holdings, equity and real estate assets held by Mexicans abroad. Neither does it measure Mexican's bank deposits abroad held by off-shore companies. To remedy this problem we propose to use an indirect estimate of the stock of foreign assets held by Mexicans obtained by Brideau, Eggerstedt and van Wijnbergen (1991). New private capital outflows were derived residually as the difference between, on the one hand, the sum of external debt and DFI flows, and on the other hand, the sum of the current account deficit (excluding interest retained abroad), the increase in net reserves and the increase in other public foreign assets. This flow measure was completed by incorporating an unofficial estimate of additional worker's remittances (compared to the official figure) before 1988. The total private capital outflow was then estimated by adding the new flow adjusted for worker's remittances to reinvested income from foreign assets. It was assumed that 100% of the income was reinvested and that the rate of return was explained two-thirds by the US CD rate and one-third by the three-month LIBOR rate. The stock, in turn, can be obtained by adding the total flow to the stock of the previous period.

ii) Worker's Remittances.

In late 1990 the government revised the methodology to estimate annual worker's remittances. The new estimate, which implied an upwards revision of about US$ 1.5 billion, was only reported for 1989 and 1990. Thus, it is likely that worker's remittances prior to 1989 are underestimated. If this is the case, the current account deficit would be overestimated and capital flight underestimated. Preliminary and yet unofficial estimates of worker's remittances reported in Table 1 were used to adjust the current account balance.

Table 1. Worker's Remittances Adjustment.

Year	Official	Adjusted	Change
1980	140	569	429
1981	128	692	564
1982	98	690	591
1983	111	824	712
1984	176	943	767
1985	173	971	797
1986	180	1082	901
1987	207	1237	1030
1988	209	1526	1316

iii) Adjustment for Inflation.

In order to estimate real private and public saving we require a measure of real/inflation-adjusted foreign financial savings. This, in turn, requires adjusting the financial components of the current account for inflation, i.e., computing real interest receipts/payments rather than nominal. Since domestic goods are the chosen numeraire, i.e., we are concerned with the value of foreigners' net claims in terms of Mexican real resources, the real interest rate on foreign assets (or on foreign debt) is obtained deflating the nominal interest rate, which depends on both the foreign interest rate and the rate of peso devaluation, by domestic inflation. More specifically:

$$(3)\quad r = [(1 + i^f)*(1 + d)/(1 + \pi)] - 1$$

where: r is the real interest rate on foreign assets/liabilities
i^f is the foreign nominal interest rate
d is the rate of devaluation between the beginning and the end of the period of the exchange rate
π is the domestic rate of inflation

The first term in brackets in equation (3) can be decomposed into:

$$(3')\quad r = i^f*[(1 + d)/(1 + \pi)] + [(1 + d)/(1 + \pi)] - 1$$

The first term on the right hand side measures the nominal interest (the foreign interest rate times one plus the rate of devaluation) in units of beginning of the period, i.e., discounted by the rate of inflation. The second and third terms measure the capital gain/loss component; e.g., if the rate of devaluation falls short of the rate of inflation there is a capital gain. It is clear from equation (3) that r is a good measure of the real cost of debt only if all the interest is paid at the end of the period, since d and π must measure end of period d valuation and inflation rates for the capital gain/loss component to make sense.

In practice, though, interest payments on foreign debt are spread throughout the year. Thus, if there is a devaluation at the end of the period the interest cost of servicing debt is likely to be overestimated by (3) since most interest payments were made at a pre-devaluation exchange rate. When interest payments are spread throughout the year a better measure of the real cost of debt (r^a) is obtained by replacing the end of period devaluation and inflation rates in the first component of (3') by the average devaluation and inflation rates with respect to the beginning of the period:

$$(4)\quad r^a = i^f*[(1 + \tilde{d})/(1 + \tilde{\pi})] + [(1 + d)/(1 + \pi)] - 1$$

where: $\tilde{d}$ and $\tilde{\pi}$ are the average devaluation and inflation rate with respect to the beginning of the period

Equation (4) was actually used to estimate the real interest on foreign debt. [2]

Note that since the foreign nominal interest rate has as well a foreign inflation component we could have rewritten (3) as:

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[2] The same procedure was not applied to income from foreign assets because it was assumed that all interest on foreign assets was reinvested.

(5) $r = [(1 + r^f)*(1 + \pi^f)*(1 + d)/(1 + \pi)] - 1$

where the f superscript indicates foreign

So that r is made up of two components: r^f, which is the real foreign interest rate, and $(1 + \pi^f)*(1 + d)/(1 + \pi)$, which is the real exchange rate. Thus, for example, a real peso devaluation increases the burden of servicing foreign debt and a real peso appreciation reduces it.

2.2.2 Fiscal Data.

Public saving is measured as the difference between current revenue and current expenditure. However, this measurement of public sector saving is inadequate if based on fiscal accounts data because the latter considers as capital expenditure items which are actually current expenditure (point i)). Besides, when computing real public saving, this measure does not capture capital gains derived from the inflation-erosion of domestic and foreign financial liabilities (point ii)) nor from the inflation tax (point iii)).

i) Current Expenditure Adjustment.

Several items which fiscal accounts compute as public investment are not strictly investment from a national accounts perspective, i.e., they don't add to the existing capital stock. These items have to be reclassified as current public expenditure which, in turn, implies lower public saving. These items are mainly military expenditure and some federal transfers which do not translate into fixed capital formation. Since the national accounts properly compute these items as current government expenditure we use national accounts data of public expenditure to estimate public saving. [3]

ii) Capital Gains From Inflation on Financial Liabilities.

Nominal fiscal deficits are a misleading measure of real public sector financial dissaving because they don't account for the loss in real value of domestic and foreign public debt which is due to inflation. The inflation-erosion of the real value of nominal debt should, thus, be subtracted from the nominal deficit. This is usually done with domestic debt, leading to the so called operational or inflation-adjusted fiscal deficit, but not with foreign debt. Only the real interest rate on domestic and foreign debt was computed as a fiscal expense. In the case of foreign debt the real interest rate was calculated as shown in equation (4) in the previous section; the real interest rate on domestic debt was obtained as follows:

(6) $r = [(1 + i)/(1 + \pi)] - 1$

where: r (i) are the domestic real (nominal) interest rate
π is the domestic rate of inflation

To avoid the problem that arose with the real foreign interest rate (average inflation different from end of period inflation) domestic real interest payments (and the inflation tax discussed below) were estimated

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[3] Fiscal accounts also compute financial investments and purchases of land/real estate as investment. Although these are clearly transactions below the line of financing, i.e., asset swaps, and thus are not public investment from a national account perspective, they don't affect our estimate of public saving since they don't require reclassifying items to current expenditure (only current expenditures are needed to estimate public saving).

mutiplying the above real interest rates and the beginning of the month stocks of debt (base money in the case of the inflation tax). Annual real interest payments were then obtained adding up monthly interest payments.

iii) Inflation Tax.

Finally, the inflation-erosion of the stock of base money (a wealth transfer to the public sector) was computed as fiscal revenue, i.e., the inflation tax. Since for most of the period commercial bank deposits at the Bank of Mexico (a major component of the stock of base money) perceived an interest the inflation tax revenue was actually less than the loss in real value due to inflation of the initial stock of base money. The actual procedure followed to estimate the inflation tax rate (applied over the beginning of period stock of base money) is:

$$(7) \qquad \pi^{BM} = [(1 + i^{BM})/(1 + \pi)] - 1$$

where: π^{BM} is the inflation tax rate
i^{BM} is the nominal interest rate on average perceived by one unit of base money

2.2.3 National Accounts Data

The most difficult issue in the computation of national accounts is the distribution of supply into its demand components, e.g., consumption, investment, exports and stock accumulation. As we discuss below and, in more detail, in Annex A, the problems which arise in the measurement of aggregate demand components can be quite crucial for evaluating private saving and, in particular, for the choice of data frequency employed. From the discussion below, we conclude that the national accounts measure of both government consumption and the resource balance are relatively accurate while fixed investment, private consumption and stock accumulation are relatively more noisy (stock accumulation being the more noisy as it generally contains a residual component) and strongly dependent on the quality of surveys of sales and stocks. Since surveys on sales are less complete for quarterly data series (which, thus, are more noisy) we only discuss annual data.

One general problem with the national account system in Mexico is that its base is probably outdated. Fixed coefficients employed to estimate current value-added are based on the 1980 input-output matrix. Given the process of trade liberalization that Mexico has undergone in the 1980s, particularly, after 1985, the coefficients of value-added to value of production are likely to have changed significantly. For example, the substitution of imported inputs for domestic value-added in the production process is likely to have reduced the coefficient of actual value-added to value of production in the industrial sector (see Annex A for a more detailed discussion of this point). In any case, this is a source of error in the measurement of saving that we cannot do anything about.

As mentioned, the most difficult issue in the computation of national accounts is the distribution of supply into its demand components. The usual problem with the distribution of demand components is that the relevant information is generally not available. Therefore, some assumptions have to be made. The balance of payments accounts normally provide fairly good information on imports and exports. Except for the exchange rate measurement difficulties of transforming foreign denominated series into local currency accounts, these series are fairly accurate. In many cases assigning total supply to the demand components can be facilitated by doing the supply/demand compatibilization at a level as disaggregated as possible. For instance, if a firm produces mostly machinery, it is clear that production should be

assigned to investment rather than consumption However, for several other sectors the prob ems of assigning total supply into its demand components is more difficult. The more serious problems arise in those sectors which products can go to several different demand components, particularly, when the fixed coefficients are likely to be out of date as in Mexico. Most food production, for example, can go to intermediate demand, private consumption, stock accumulation (if storable) and exports.

While the good characteristics help assigning the good to investment and consumption, something else is required to discriminate when a good goes to stock accumulation or is actually invested or consumed. That usually requires good-quality survey data on sales at the sector or company level. The difference between what is produced and what is sold is the stock accumulation. The lack of good sales information normally implies having to use fixed distribution coefficients from the base period. The coefficients are more likely to be stable or less variable for consumption and investment, and therefore stock accumulation is often the residual variable. Surveys on sales and stocks are therefore the critical input for a good distribution between investment or consumption and stock accumulation. Surveys on sales are less complete for quarterly data series which, thus, are more noisy than annual data. In this report we therefore only employ annual data.

2.3 Durable Consumption

One fundamental question one wants to address when studying private saving and consumption series is to know whether any change in the rate of private wealth accumulation is permanent or transitory. The implications for public policy and the economy in general are dramatically different if such an increase is permanent or transitory. A permanent increase in consumption would not raise much concern if based in a permanent increase in income, while it would be fairly unwise if the change is due to misinterpretation (as permanent) of a transitory shock in income. However, because it is so difficult to disentangle permanent and transitory shocks from income, a large decrease in saving rates (increase in consumption) is normally viewed with concern.

However, there is one case when it is rather easy to judge that an increase in consumption is transitory and therefore there should not be much policy concern, and that is when most of the increase is in durable goods in the wake of a trade liberalization (as in Mexico's). Because prior to trade liberalization demand for durable goods may have been repressed, through quotas, once trade is liberalized a sudden once-and-for-all increase in the stock of durable consumption is likely to take place. Consumer durable imports may also overshoot if agents expect a reversal of trade liberalization (the increase in demand for imported consumer durables being linked to expected capital gains from the policy reversal).

Alternatively, we could think of durable expenditures as investment expenditures and ascribe to consumption only a service flow associated to the stock of durable goods. In the next section we will consider the durable-non-durable decomposition when interpreting the movement of private saving rates in Mexico.

2.4 Data.

All raw variables employed in this study are listed in Annex B. All

official national account items from identity (1) were employed, and therefore the indirect as well as direct measure of private saving (see section 1) are identical. All nominal variables in identity (2) not included in identity (1) were deflated by the GDP deflator. All saving rates are calculated in both current and 1980 pesos. Data sources and adjustment procedures are described below.

National Account (NA) Aggregates. The data source is INEGI (National Institute of Statistics) and corresponds to gross aggregate investment, i.e., includes inventory accumulation. INEGI reports the series in current pesos and in constant pesos of 1980.

Balance of Payments (BOP) Aggregates. The principal BOP data source is Bank of Mexico. However, the resource balance employed in identity (2) is a NA aggregate. The source for the stock of foreign private assets is Brideau, Eggerestedt and van Wijnbergen (1991). The current account figures are based on revised, but yet unofficial, estimates of worker's remittances prior to 1988 (see Table 1).

Net other factor services (NFS) was obtained as follows:

(8) $$NFS = -[CACC - iFo + iDn + (M-X)]$$

where: CACC is the current account adjusted for estimated worker's remittances
iFo is the official figure of interest retained abroad
iDn is nominal interest on foreign debt (net of central bank reserves)
M-X is the BOP trade deficit

All flow variables originally in US dollars were converted to nominal pesos employing the average commercial exchange rate ("de flotacion controlada de equilibrio") except for the resource balance which was available in pesos from national accounts source and interest payments/receipts.

The terms iDpr and iDpu in identity (2) were obtained multiplying the share of private sector/public sector foreign debt in total foreign debt by the term iD. The terms iF and iD (real foreign interest payments/receipts) were calculated as the product of: the estimated real interest rates (see equations (3) and (4) in subsection 2.2.2), the beginning of period debt/asset stocks measured in US dollars and the beginning of period commercial exchange rate.

Fiscal Accounts (FA) Aggregates. The principal data source for FA is Bank of Mexico. However, current government expenditures (excluding interest) employed in identity (2) is a NA aggregate. Domestic debt stocks correspond to the non-financial public sector consolidated with the Bank of Mexico and the Development Banks and is reported in the 1990 Annual Report of the Bank of Mexico ("Deuda Consolidada con Banco de Mexico"). Prior to 1983 this measure was not available and so we employed the consolidated debt of the non-financial public sector and all the financial system ("metodologia consolidada").

Domestic real interest payments and the inflation tax were estimated mutiplying real interest rates, obtained following the procedure described in subsection 2.2.2., by the beginning of the month stocks of debt and base money. Annual real interest payments are then obtained adding up monthly interest payments. Lack of monthly data impeded performing the same procedure with foreign public debt. The annual nominal interest rate on base money (equation (7)) was estimated as the ratio of interest paid by the Bank of Mexico (accumulated to December) and the average annual stock of base money. The monthly rate was the corresponding cumulative monthly rate that yielded

the just described annual rate. The annual rate for 1980 was assumed to be equal to the 1981 rate (data on interest paid by the Bank of Mexico to banks in 1980 was not available).

The term other government revenues (OR) was obtained as follows:

(9) $OR = EcBal + Ipu + G + iB + iDpun - T$

where: EcBal is the fiscal balance
Ipu is public investment
G is current government expenditure (FA source)
iB is nominal interest on domestic debt
iDpun is nominal interest on external public debt
T is tax revenue

3. Saving Rates in Mexico, 1980-90

In subsection 3.1 we compute the items in identity (2) and assess saving performance over the 1980-90 period. A comparison between our saving measure and the conventional measure is made in subsection 3.2. Inspection of saving measures reveals a high degree of complementarity between public and private saving throughout the decade in both the proposed and conventional measures. However, it becomes difficult to interpret this complementarity without a closer look at the disaggregated items in both private and public savings. Thus, we analyze the behavior of private saving components: private consumption, in subsection 3.2, and disposable income, in subsection 3.3.

3.1 Saving Performance in 1980-1990.

Figures 1 and 2 show our measures of private saving as a percentage of GDP in 1980 pesos and in current pesos respectively. Some important differences between the figures in current and real pesos arise after 1985; these differences stem from changes in relative prices brought about by trade liberalization. In the subsequent discussion we focus on the saving measures in constant pesos (Figure 1).

The large flow of foreign finance that Mexico received in the early 1980s, which mainly financed public sector oil investments, came to an abrupt end in 1982 (Figure 3). As the debt crisis unfolded foreign saving contracted sharply prompting an equally drastic increase in public saving (Figure 1). While higher public saving stemmed primarily from an increase in revenue, higher public tariffs until the mid 1980s and higher tax revenue towards the end of the decade (respectively OR and T in Figure 4), it also relied heavily on inflation-driven wealth transfers (Figure 5). All this, of course, affected adversely private saving. Lower investment and the partial recovery of domestic saving came along with a sizable accumulation of foreign assets by the private sector. These assets eventually played an important role in the private sector income structure (Figure 6).

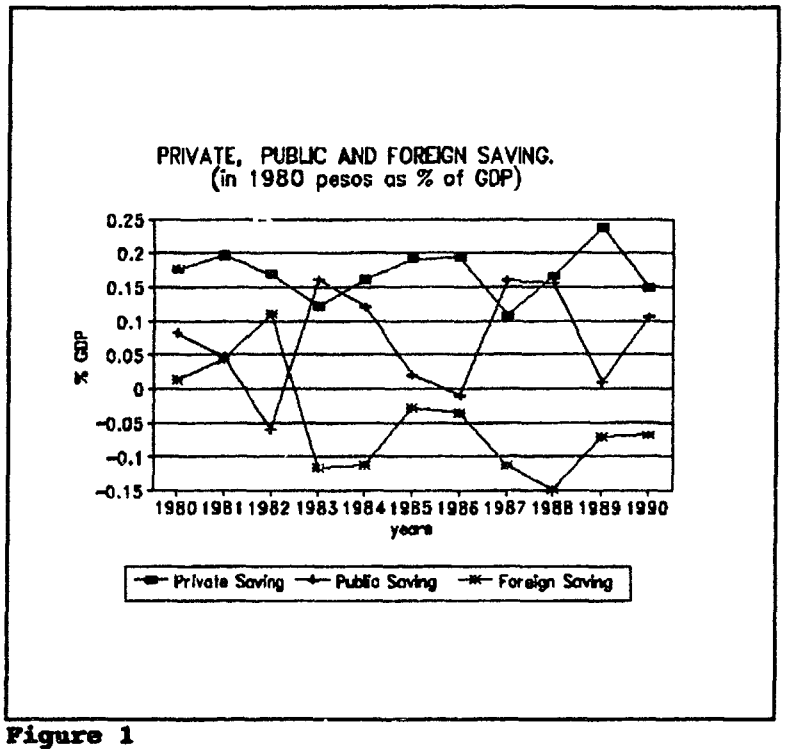

Figure 1

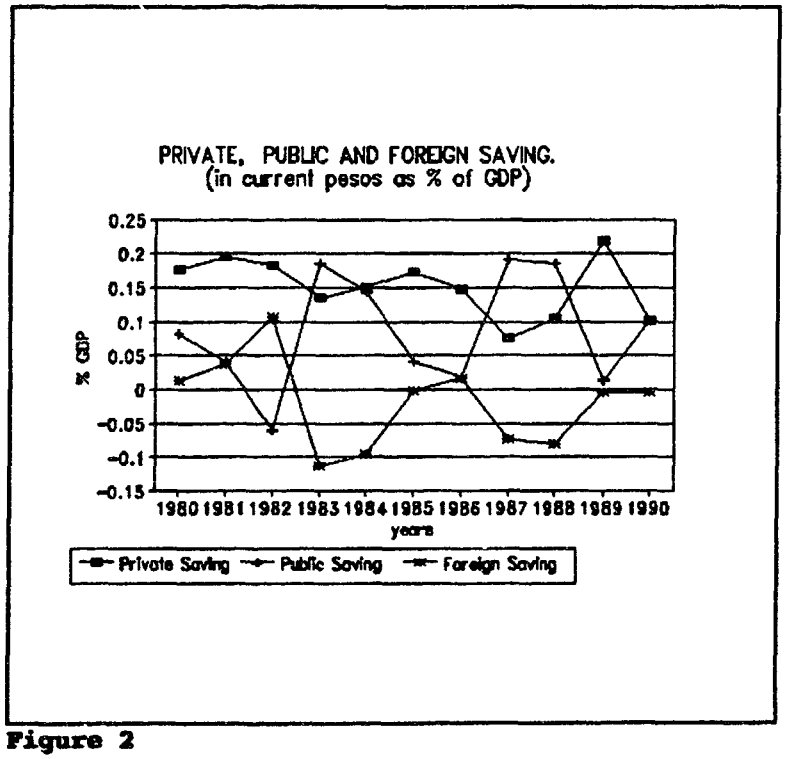

Figure 2

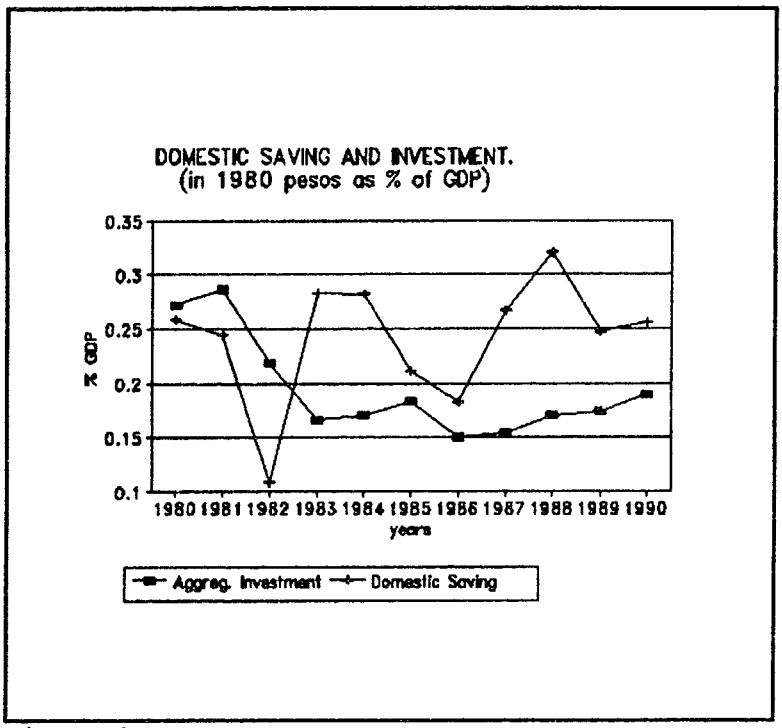

Figure 3

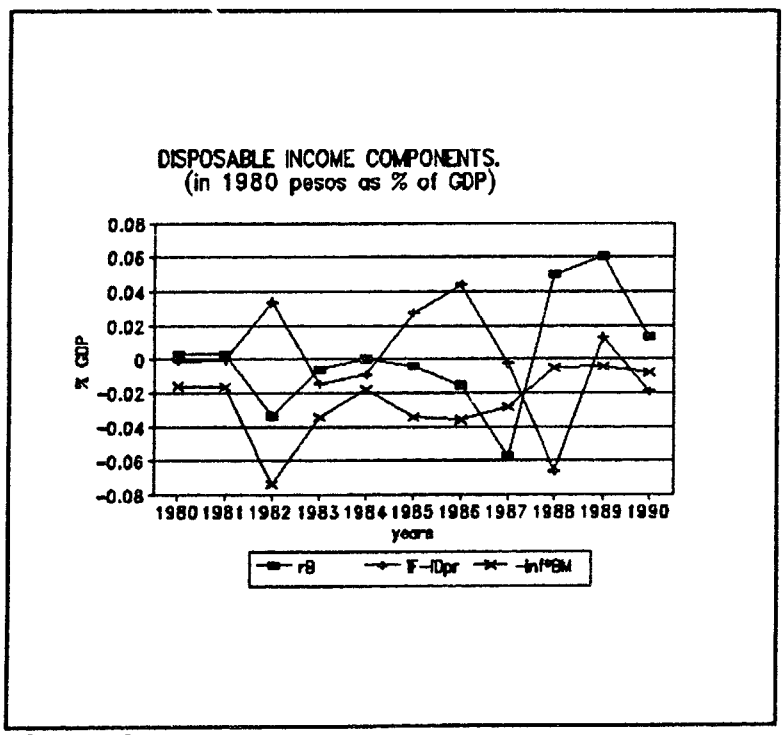

Figure 4 a)

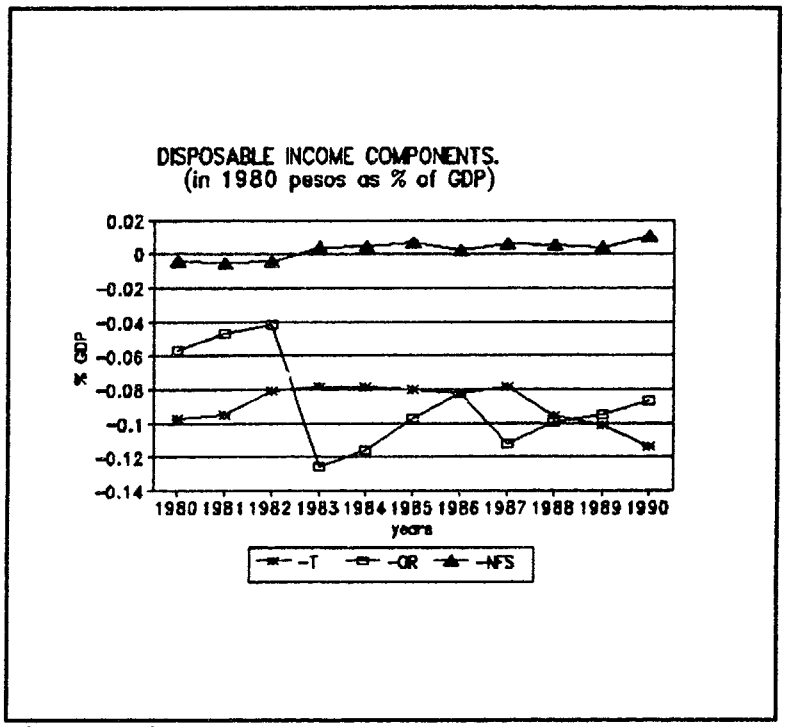

Figure 4 b)

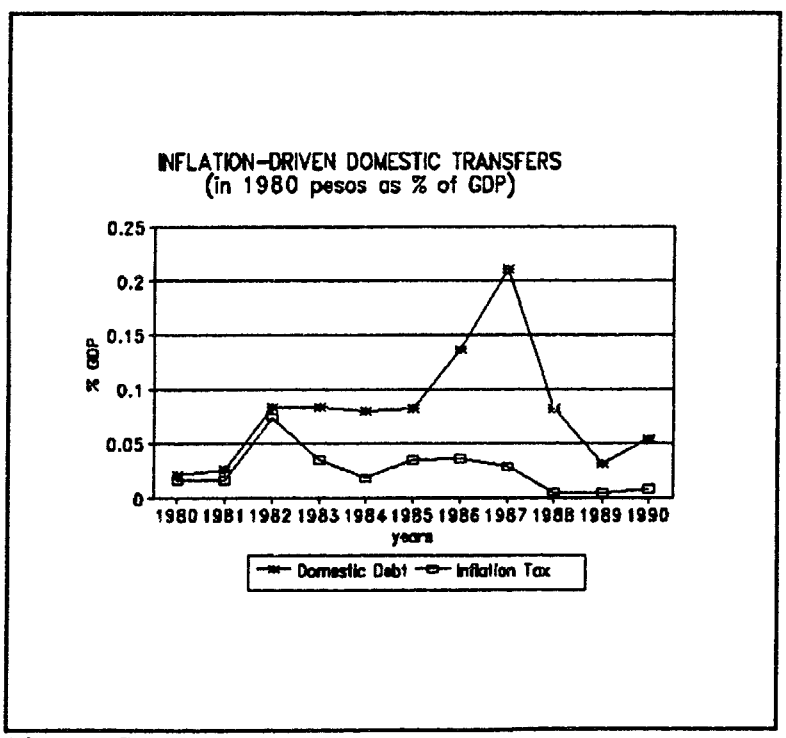

Figure 5

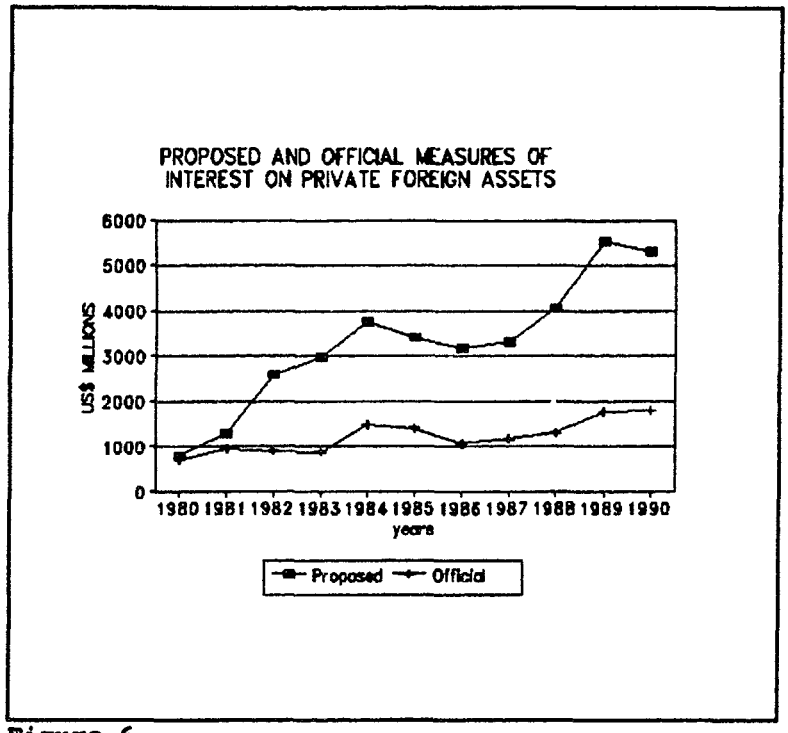

Figure 6

The drop in domestic and, in particular, public saving in 1985-86 was by and large a temporary phenomenon: it was a consequence of the collapse in oil prices and was more than offset in later years through a deepening of the non-oil primary fiscal surplus. While foreign saving was clearly influenced by external events, it dropped after the debt crisis and it rose with the collapse of oil prices in the mid 1980s, it was as well strongly influenced by real exchange rate fluctuations. As Figure 7 illustrates, the real peso devaluations in 1982 and in 1985-86 exerted an adverse impact on public finances while the subsequent real peso appreciation exerted the opposite effect in the late 1980s.

Private saving fluctuated substantially during the period. Figure 1 even suggests a cyclical pattern. An interesting feature, as Figure 8 illustrates, is that fluctuations in the private saving rate stem primarily from fluctuations in disposable income; private consumption also oscillates, lagging somewhat in response to changes in disposable income, but within a much narrower band. As mentioned, much of the variability in disposable income resulted from public sector adjustments to the debt and oil crisis. A more dissaggregated analysis of private saving, however, is left to subsections 3.3. and 3.4 where we examine the performance of consumption and disposable income sub-components.

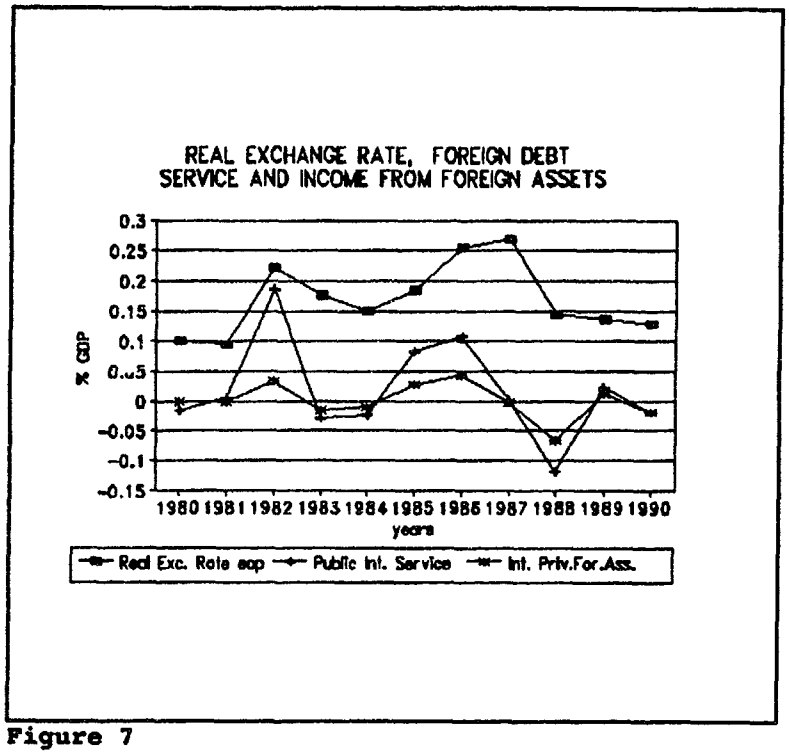

Figure 7

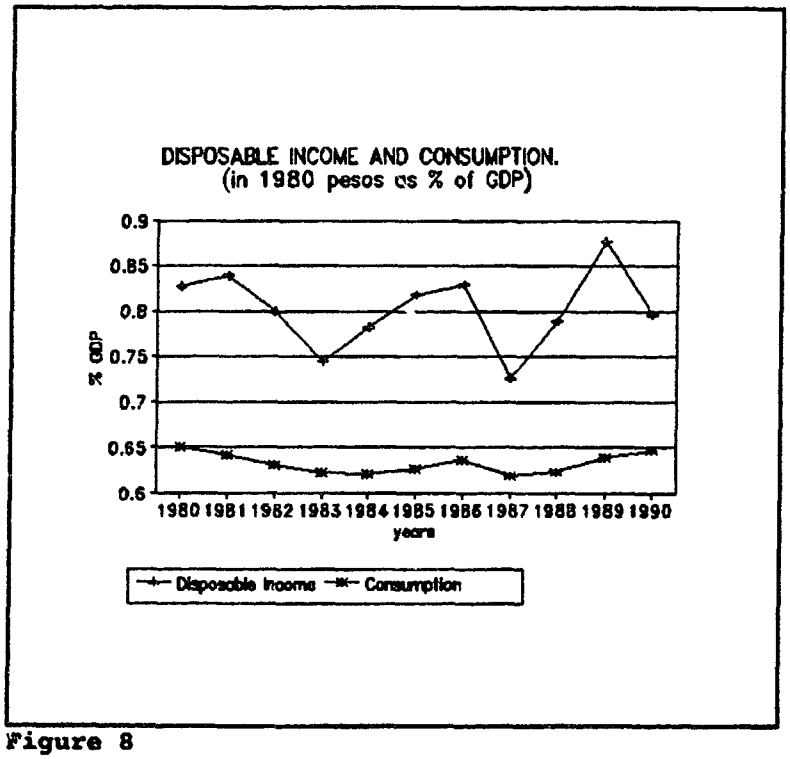

Figure 8

3.2 Comparison with the Conventional Measure of Private Saving.

Despite the sharp decline in private saving observed in 1990 at 15% the private saving rate is somewhat below the average of the decade but well above its lows in 1983 and 1987. This is in sharp contrast with what the conventional measure of private saving suggests (Figure 9): according to this measure private saving rates in 1990 are at their lowest level since 1981. The conventional private saving measure is systematically higher than the one proposed. This is largely due to the inflation-adjustment of domestic and foreign interest income and the inclusion of the inflation tax in our measure; note that the private sector a net creditor of both the public and foreign sectors. As Figure 10 shows the discrepancy between the two measures widens with inflation.

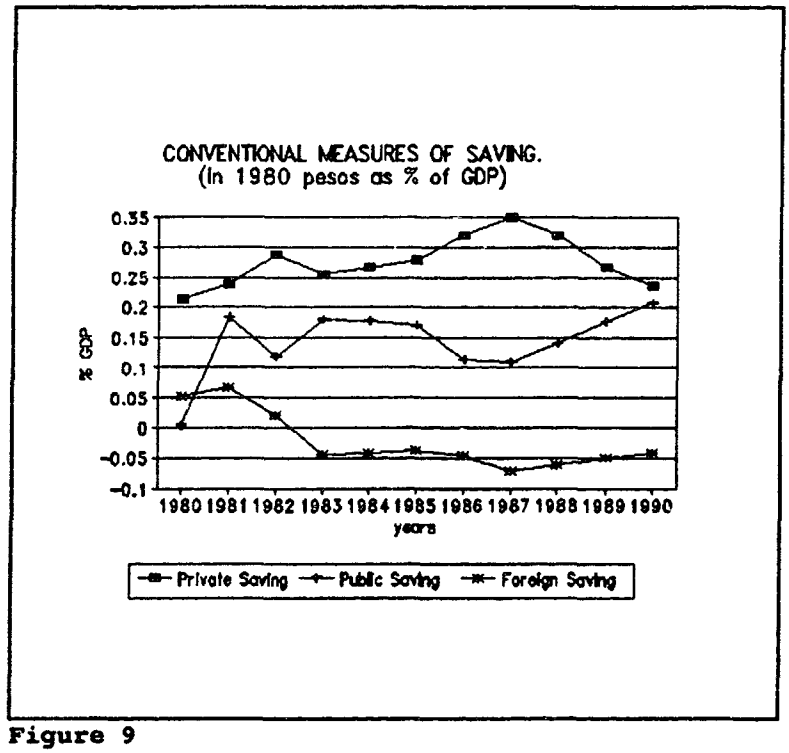

Figure 9

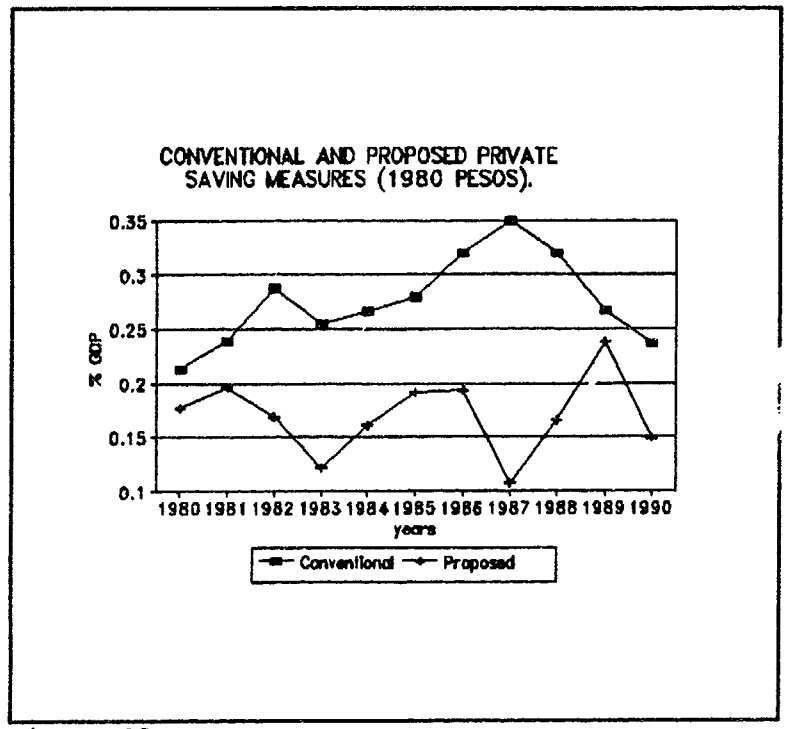

Figure 10

3.3 Disaggregation of Consumption Series

A detailed disaggregation of consumption, including series with quarterly and monthly data frequencies, is provided in Annex C. Our analysis is limited to data with annual frequency and only considers disaggregation of consumption into durable consumption, non-durable consumption and services.

In 1989-90 private consumption grew at an average annual real rate of 5.4%; as a consequence, in 1990 the private consumption-GDP ratio got close to the record level for the decade attained in 1980. It is useful to check whether any particular component of consumption explains this trend. As Figure 11 shows the shares of the three consumption components out of total consumption were relatively stable over the 1980-90 period. However, durable consumption increased 28% between 1988 and 1990 and represents about one-quarter of the increase in total consumption over the same period. Durable consumption cannot explain an important part of total consumption growth because durable consumption only represented about 11% of total consumption during the period: the average growth of non-durable and services over 1988-90 is still a high 4.9%, or about 2 percentage points faster than output growth.

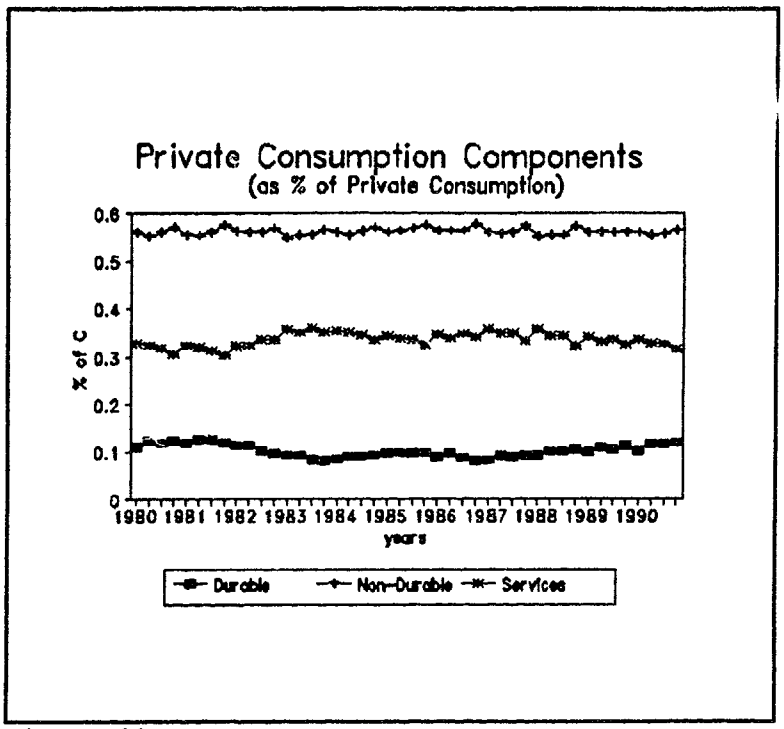

Figure 11

3.4 Dissaggregation of Disposable income

As discussed above most of the variability of private saving rates is accounted for by changes in disposable income. Figure 4 shows all non-GDP items of disposable income as a proportion of GDP. The real interest on domestic debt (rB), other government revenue (OR), net income on foreign assets (iF-iDpr) and the inflation tax (inf*BM) all exhibit important changes during the 1980-90 period. A closer inspection at the behavior of these items is thus required to evaluate the factors underlying private saving patterns.

The large drop in disposable income, and associated decline in private saving, in the early 1980's stemmed principally from the sharp increase in the inflation tax and the sharp drop in the domestic public interest service in 1982, and the more than doubling of other government revenues (OR) in 1983 (Figure 4). The impressive OR record was mainly the result of large increases in public utility prices as part of the structural adjustment process in Mexico. Disposable income recovered partially towards the mid-1980s. By and large this was due to a partial reversal of the above described changes: a temporary reduction of OR in 1985 and 1986, a substantial reduction in the inflation tax and a larger domestic public interest service. Net real income from private foreign assets also increased favored by a real peso depreciation and the growing size of the stock of foreign assets.

The steep decline in disposable income in 1987 is accounted for by three factors: a reduction in the real domestic debt service, a reduction in net income from foreign assets, and a new increase in other government revenue (OR). The drop in the real domestic interest service, equivalent to about 4 percentage points of GDP in 1987, was spurred by surprise inflation which hit

the economy towards the end of the year. Negative real interest rates on domestic debt and the recovery of OR explain why, along with the decline in private saving, there was a sharp improvement in public saving during 1987. The reduction in income from foreign private assets is accounted for by a real peso appreciation (measured December to December) and lower external interest rates.

The stabilization program launched in December 1987, called "Pacto", was extremeley successful in bringing down inflation. However, real domestic interest rates rose to unprecedentedly high levels, about 40% and 30% respectively in 1988 and 1989. Higher interest receipts from domestic government debt were the single most important factor behind the large increase of disposable income in 1988-89. Successfull stabilization was also associated with important changes in the public sector revenue structure: the sharp fall in the inflation tax was mostly offset by increases in conventional tax revenue. The other volatile factor of disposable income relevant in the late 1980s was real income from foreign assets. The real peso appreciation in 1988 led to a sharp reduction in real income from foreign assets; this was followed by an increase as the real exchange rate stabilized in 1989.

The deepening of fiscal adjustment and able domestic and foreign debt management combined to eventually bring down domestic real interest rates. [4] The sharp drop in disposable income in 1990 was in fact prompted by the associated decline in the domestic public interest service and, to a lesser degree, by a reduction in real income from foreign assets. Reduced income from foreign assets, in turn, stemmed from lower external interest rates and a new real peso appreciation in 1990. There was a decline in other government revenue but this was offset by a new increase in conventional tax revenue.

In short, most of the variability of disposable income in 1980-90 was associated to volatile transfers between the public and private sectors which, thus, account for much of the observed complementarity between public and private saving. Real exchange rate fluctuations, associated both with external shocks and the stabilization program in the late 1980s, were the other volatile factor explaining the variability of disposable income. The direct impact of real exchange rate fluctuations on private saving increased during the decade along with the stock of private foreign assets.

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[4] For example, see Oks (1991).

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Brideau, R., H. Eggerstedt and S. van Wijnbergen, "Measuring Capital Flight in Mexico" mimeo, World Bank, 1991.

Meller, P., E. Livacich and P. Arrau (1984) "Una revisión del milagro económico chileno: 1976-1981" en Collección Estudios CIEPLAN 15, Santiago.

Oks, Daniel F. (1991) "Devaluation Expectations and Interest Rates in Mexico: the Role of Domestic Debt Management", Discussion Paper, LAC Series, World Bank.

Annex A: A Revision of National Accounting Procedures in Mexico

In this annex we briefly review national accounting procedures in Mexico in order to assess the measurement problems associated to its different components. The discussion below is based on what we have been able to learn about the Mexican national account system.

Computation of the gross value of production and value-added

The first step to compute national accounts series comprises the computation of the Gross Value of Production (VP). Most countries, including Mexico, have surveys and statistics with quantum indices of production and value of production at current prices for several sectors of the economy. When no direct information about the VP at current prices is available, independently computed price indices of the different sectors are generally available. These statistics allow to compute good-quality data of VP in both real and nominal terms. The next step is to compute the value added by subtracting to the VP the intermediate purchases by firms. When there are no good surveys to provide this information directly (the surveys provide the information at current prices; e.g. industrial surveys), a commonly used methodology is to apply the fixed coefficients from the Input-Output Matrix. The Matrix provides the exact coefficient for the year in which the matrix was computed, which is normally the base year of the national account system.

This methodology, however, could be inappropriate if the coefficients vary too much, something which often happens with large structural changes in the economy; and very specially, when trade liberalizations takes place. In Meller, Livacich and Arrau (1984) it is shown that after the trade liberalization of the late seventies in Chile, the value-added/VP coefficient was substantially reduced in the industrial sector, mainly due to the substitution of domestic value-added by imported inputs in the production process. The value-added of the industrial sector, therefore, was overestimated because the fix coefficient methodology did not account for this fact. This observation suggests the urgent need to change the base of the national account system (compute a new input-output matrix) after a trade liberalization takes place. In 1985 Mexico started the process of trade liberalization; by 1990 it already was one of the most open developing countries in the world. Since the base year of the national account system is still 1980 the urgency for changing the base of the national account system becomes apparent.

If our presumption is correct and the computation of value added is overestimated in Mexico, then the series of private saving are also overestimated, specially after 1985. However, for the purposes of this report we are unable to evaluate this problem as there is no information available which would allow us to do so.

Distribution of total supply into its demand components

The most difficult part of computing the national accounts is the distribution of supply into its demand components. As we discuss below identifying the problems which may arise with the measurement of demand components is crucial to assess how reliable our private saving measure is.

The supply of sector "i" is comprised by the VP of the sector "i" plus imports (M) originated abroad in that sector (e.g. gross value of production of the industrial sector plus imports of industrial products).[5] The total

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[5] Throughout the report we abstract from commercialization margin, which is the other component of the total supply at consumer prices.

supply must be distributed over intermediate demand (ID) , final private consumption (C), government consumption (G), gross fixed capital formation (FKF), stocks accumulation (SA) and exports (X). The following table illustrate this description.

Table A.1:

Value Prod.	Imp.	Supply and Demand	Interm. Demand	Priv. Cons.	Gov. Cons.	Fix Inves.	Stck. Accum.	Exp.
VP_1	+ M_1	= sector$_1$ =	ID_1	+ C_1	+ G_1	+ FKF_1	+ SA_1	+ X_1
.	.	=	.	= .	.	.	.	.
VP_j	+ M_j	= sector$_j$ =	ID_j	+ C_j	+ G_j	+ FKF_j	+ SA_j	+ X_j
VP	+ M	= Total =	ID	+ C	+ G	+ FKF	+ SA	+ X

The notation in consistent with equation (2) after we define Y = VP - ID, and I = FKF + SA.

The usual problem with the distribution of demand components is that the relevant information is generally not available, and some assumptions must be made. The balance of payments accounts normally provide fairly good information on imports and exports. Except for the exchange rate measurement difficulties of transforming foreign denominated series into local currency accounts, these series are fairly accurate. This means that measured total supply is a good measure of actual supply of goods and services at the sector level. For several sectors (and/or products), however, the problems of assigning the total demand into its demand components is very difficult. The discussion below states why some series can be trusted more than others.

Assigning total supply to the demand components can be facilitated by doing the supply/demand compatibilization at a level as disaggregated as possible. For instance, several firms, or even sectors, specialize in exports. Consequently the value of production would mostly be assigned to exports. The only uncertainty could be, if the commodity is storable, how much of total supply goes to stock accumulation. If good exports series are available, stock accumulation can be accurately obtained by difference (all produced goods not exported).

Something similar could be done if the company produces mostly machinery, or inputs for some other sector, which are easy to assign due to the characteristics of the good. The value of production of the construction sector, for instance, is another sector which is mostly assigned to fixed capital formation, and does not produce mayor measurement problems to other components. Government consumption is another variables relatively easy to assign. G is mostly the value of productions of sectors associated to the government. These are typically public administration plus government health and education production (expenses).

The more serious problems appear with those sectors or products which can go to several different demand components. Most food production, for instance, can go to intermediate demand (purchases of other firms), private consumption, to stock accumulation (if storable) and exports. Similar problems occur with several investment goods. While again exports are generally well measured, the distribution to the other components can be very cumbersome.

Total intermediate demand must add up to total intermediate purchases by firms. In general there is no good methodology to assign the portion of total supply that goes to intermediate demand (except when the characteristics of the good makes such assignment obvious). Again, there is heavy reliance on fixed coefficients ID/VP in those sectors or products where the assignment is not obvious. The fixed coefficients are known from the base year. Of course, applying fixed coefficients to most sectors would not produce in general a total intermediate demand equal to the total intermediate purchases of firms, so ad-hoc adjustments are necessary to produce such a match. In general however, because these coefficient are mostly determined by technological factors, this part will not produce too much deviation from actual figures. Besides, the aggregate intermediate demand must add up to aggregate intermediate purchases by firms, which means that at least at the aggregate level intermediate demand is "allegedly" well measured.[6]

From the discussion so far we can conclude that with the exception of fix gross capital formation, private consumption and stocks accumulations, all other measured demand components are relatively accurate measures of actual series (at least at the aggregate level). Indeed, the series of investment, private consumption and stock accumulations are potentially the ones with more measurement errors.

Although looking at the good characteristics is often sufficient to differentiate between goods that should be assigned to investment or consumption, that is not enough to differentiate when a good goes to stock accumulation or is actually invested or consumed. In order to do that, we need to have good survey data on sales at the sector or company level. The difference between what is produced and what is sold is the stock accumulation in the case of domestically produced goods.

With the total supply of foreign goods we have a similar problem. The total of goods imported is the supply of foreign goods available, but we need to know the actual sales from commerce (distributors of imported goods) in order to differentiate between stock accumulation and actual consumption/investment.

Surveys on sales and stocks, therefore are the critical information needed to have a good distribution between investment/consumption and stocks accumulation. This leads to the issue of which data frequency is of better quality. Quarterly information is less accurate precisely because good-quality surveys on sales and stocks are not available at this frequency, and therefore the distribution between consumption, investment and stocks accumulation is more cumbersome. Even at the annual level this is a large problem, but presumably due to better surveys and monitoring at the year level, facilitated by the normal cycle of business reporting (balance sheets, tax payments, etc.), the annual data is better. Among the three noisy components (fixed investment, private consumption and stock accumulation), stock accumulation is likely to be the most noisy. The reason for that is that the lack of sales information normally require to use again fixed distribution coefficients from the base period. The coefficients are more likely to be stable or less variable for consumption and investment, and therefore stock accumulation is often the residual variable.

In short, gross domestic product, exports, imports and government consumption are relatively well measured at the aggregate level. Thus, the summation of fixed investment, private consumption and stock accumulation is also accurate. However, the distribution of this summation among the three

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[6] We say "allegedly" because it is not obvious that intermediate purchases by firms is well measured as discussed above. However, we suspect that the most substantive measurement errors are not due these series.

components is relatively inaccurate, specially for stock accumulation. This problem is more serious in the case of quarterly data.

Annex B: Statistical Annex.

Notation for Tables B.1 and B.2

Table B.1

a) and b)

I	aggregate investment
Y	gross domestic product (GDP)
T	total taxes
C	private consumption
Gna	non-interest current public expenditure (national accounts)
G	non-interest current public expenditure (fiscal accounts)
(M-X)na	trade deficit (national accounts)
Erbop	beginning of period commercial exchange rate
Eravg	average commercial exchange rate
LIBOR	foreign interest rate (2/3 of LIBOR plus 1/3 US CD rate)
EcBal	economic fiscal deficit
Ipu	public investment
GDPd	GDP deflator
iB	nominal interest domestic public debt
iDpun	nominal interest on foreign public debt
iBf	nominal interest on domestic federal debt
iDpufn	nominal interest on foreign federal debt
inf	CPI inflation (december to December)
inf-avg	CPI inflation (average compared to beginning of period)

c)

Dpr	private foreign debt
F	private foreign assets
CACC	current account balance
iFo	interest retained abroad (official)
WR	workers remittances
int-exp	interest received from abroad (official)
iDn	net foreign interest paid (excluding interest on private assets)
US-WPI	wholesale price index of US
(M-X)	trade deficit (BOP accounts)
iD-g	gross external interest paid
D	total foreign debt
Dpu	public foreign debt

d)

DD	domestic debt
CBD-BM	commercial bank deposits at Bank of Mexico
Cetes	Cetes interest rate (90 days to 1984, 28 days thereafter)
CPI	consumer price index
MBASE	monetary base
iB	domestic interest on public debt

Table B.2.

(% of GDP)

Sp/Y	private saving
Sg/Y	public saving

Sf/Y	foreign saving
C/Y	private consumption
Yd/Y	disposable income
NFS/Y	net factor service (see identity 2 in text)
rB/Y	real interest service on domestic debt
iF/Y	real interest on private foreign assets
iDpr/Y	real interest on private foreign ebt
T/Y	total taxes
OR/Y	otherpublic revenue (see identity 2 in text)
inf*BM/Y	inflation tax

TABLE B.1. BASIC DATA.

a) Current 10-9 pesos

	I	Y	T	C	Gna	G	(M-X)na	ERbop	ERavg	LIBOR	EcBal	Ipu
1980	1214	4470	435	2909	449	395	101	22.802	22.95	12.5	-292.6	429.2
1981	1678	6128	592	3944	660	572	155	23.26	24.51	15	-797.1	789.4
1982	2244	9798	791	6037	1026	927	-491	26.2	57.44	11.6	-1524.3	995.9
1983	3710	17879	1399	10882	1574	1549	-1713	96.3	120.16	9	-1456.1	1338
1984	5853	29472	2322	18590	2722	2353	-2307	143.62	167.76	10	-2105.8	1984.8
1985	10034	47392	3783	30575	4374	3899	-2408	191.95	256.95	7.8	-3808.9	2867.4
1986	14489	79536	6582	54209	7208	6738	-3629	368.2	611.35	6.3	-11465	4773.8
1987	37164	193552	15275	126052	16505	15844	-13829	915.1	1366.7	6.3	-27788	10729
1988	83209	396073	37844	270751	32961	30165	-9150	2209.7	2250.3	7.1	-36383	17300
1989	117817	516710	52009	340023	54460	40226	-4410	2281	2453.2	8.5	-24619	20364
1990	131288	668691	76201	464964	75692	50878	3253	2641	2807.3	7.8	-15106	32701
1991								2945.4				

	GDPd	iB	iDpun	iBf	iDpufn	iBBM	inf	inf-avg
1980	1	107	51	54.9	22.1	0.13154	0.29781	0.1423
1981	1.260254	179	126	140.4	33.5	0.13154	0.28683	0.1354
1982	2.027819	481	324	406	109	0.20519	0.98873	0.3901
1983	3.862381	1383	829	1137	388	0.30656	0.80769	0.3717
1984	6.144968	2347	1163	1813	548	0.3174	0.59169	0.536
1985	9.631618	3705	1738	3114	893	0.15821	0.63744	0.2649
1986	16.79482	9598	3499	8653	2100	0.26953	1.0574	0.4288
1987	40.15946	29702	8494	27990	5967	0.41485	1.5916	0.6157
1988	81.01484	51982	14163	49258	10064	0.26063	0.51657	0.2895
1989	102.5043	47322	18028	44638	12736	0.0512	0.19697	0.086
1990	127.7021	45142	20426	39524	17885	0.02036	0.29929	0.1357

b) Current US$ million

	Dpr	F	CACC	iFo	WR	int-exp	iDn	US-WPI	(M-X)	iD-g	D	Dpu
1980	6680	6474	-10740	698	429.6	1022	5823	1	4345	6147	40522	33842
1981	7300	8614	-16052	946	564.3	1386	9045	1.0534	6053	9485	54195	46895
1982	10200	22376	-6221	904	591.9	1325	11782	1.070886	-5942	12203	73518	63318
1983	8100	33047	5418	873	712.5	1279	9697	1.090162	-14382	10103	83918	75818
1984	14800	37652	4238	1481	767.1	2074	11122	1.103353	-13892	11715	88176	73376
1985	16296	43746	1237	1417	797.7	1822	9751	1.11538	-9134	10156	86662	70366
1986	15745	50419	-1673	1072	901.9	1462	7952	1.073442	-5841	8342	91175	75430
1987	15103	52642	3967	1174	1030.3	1888	7383	1.121854	-10380	8097	94442	79339
1988	14148	57221	-2443	1306	1316.8	2507	7438	1.173571	-4106	8639	96056	81908
1989	5931	65177	-5447	1761	1406	2580	8459	1.216641	-1765	9278	94746	88815
1990	3999	68027	-6610	1796	1500	2632	8182	1.27723	1153	9018	88512	84513
1991											91787	82381

c) Constant 10-9 1980 pesos

	I	Y	C	Gna	(M-X)na
1980	1213.984	4470	2909	449	101
1981	1392.985	4862	3123	495	149
1982	1054.856	4832	3046	505	-226
1983	769.959	4629	2883	519	-458
1984	817.006	4796	2977	553	-450
1985	901.412	4920	3083	558	-379
1986	710.712	4736	3011	566	-464
1987	742.907	4820	2984	559	-531
1988	833.731	4889	3047	556	-448
1989	877.738	5041	3220	553	-387
1990	991.255	5236	3387	562	-309

(continued Table B.1)

d) Monthly Data

		DD	CBD-BM	Cetes	CPI	MBASE	iB
					127.6		
1980	1	300	348.7	20.36947	133.8	509	2.2
	2	308.5	357.9	21.05882	136.9	506.1	2.9
	3	297.7	365.5	23.51282	139.7	523.5	15.8
	4	314.0	384.9	24.64602	142.1	531.8	7.4
	5	326.3	386.4	24.65799	144.4	545.7	9.9
	6	366.1	389.9	23.71503	147.3	563.1	7.5
	7	365.6	421.8	22.95506	151.4	564	4.7
	8	370.4	419.8	23.48905	154.6	593.8	5.5
	9	375.7	430.6	25.95585	156.3	593.6	20.8
	10	390.1	437.9	27.54375	158.6	596.7	7.2
	11	410.2	451.9	28.86415	161.4	623	9
	12	507.1	501.9	31.23694	165.6	647.7	13.9
1981	1	559.1	482.6	32.66126	171.0	718.1	4.2
	2	568.2	499.9	32.52332	175.2	696.3	4.1
	3	574.5	525.6	32.26028	178.9	717.5	22.7
	4	607.0	534.6	32.02263	182.9	741.1	12.1
	5	646.5	570.2	31.673	185.7	768.1	9
	6	648.7	577.1	31.99764	188.3	804.6	11.4
	7	673.1	610.9	35.01013	191.6	825.6	19.4
	8	646.9	632.4	38.51424	195.6	878.6	11.3
	9	652.4	650.4	39.00737	199.2	950	53
	10	650.9	663.9	38.8515	203.6	905.6	9.2
	11	697.3	702.3	38.29406	207.5	939.9	12.7
	12	722.2	723.1	38.21641	213.1	1008.3	9.8
1982	1	808.8	752.5	39.42366	223.7	1041.9	5.1
	2	795.8	996.8	41.92797	232.5	1059.6	30
	3	837.1	1006.1	40.73063	241.0	1314.9	60.1
	4	916.7	999.2	45.13605	254.1	1324	-13.1
	5	865.1	1030.5	52.0214	268.4	1342.7	24.9
	6	856.7	1050.7	63.1296	281.3	1443.5	34.1
	7	902.7	1120.4	65.65092	295.8	1410.4	36
	8	971.8	1324.6	69.94846	329.0	1494	54.6
	9	1,151.1	1318.8	60.82577	346.5	1734.4	27.3
	10	1,536.7	1352.0	51.32755	364.5	1751.1	49.2
	11	1,741.5	1441.7	65.07097	382.9	1819.5	77.4
	12	1,958.6	14320.0	72.31935	423.8	1943.9	95.5
1983	1	2,224.6	1537.2	75.59666	469.9	1983.4	77.5
	2	2,099.2	1522.4	77.83877	495.1	2031.2	92.7
	3	2,150.2	1587.3	82.77061	519.1	2016.9	89.2
	4	2,095.7	1563.2	80.35522	552.0	2092.8	45.2
	5	2,167.8	1620.0	81.0995	575.9	2081.5	104.1
	6	2,201.9	1696.7	79.94448	597.7	2088.8	93
	7	2,430.1	1733.5	77.74492	627.3	2203.6	125.7
	8	2,611.6	1856.9	71.98349	651.6	2250.5	155.5
	9	2,780.1	2005.6	70.43278	671.7	2392.6	-93
	10	2,777.8	2057.8	67.45266	694.0	2517.5	340.9
	11	3,284.1	2212.6	66.8256	734.7	2600.8	83.4
	12	3,562.7	2392.1	66.75107	766.1	2799.6	269
1984	1	4,031.6	2470.9	65.4434	814.8	3136.3	149.3
	2	4,263.7	2613.4	61.34852	857.8	3177	147.5
	3	4,500.9	2774.0	55.72473	894.5	3307.4	249.6
	4	4,713.8	2867.0	56.44791	933.2	3515.2	160
	5	4,854.6	2965.8	61.14508	964.1	3647.9	222.5
	6	5,043.8	2962.4	62.32483	999.0	3756.4	216.5
	7	5,174.8	3129.3	62.32483	1031.8	3791.8	197.9
	8	5,392.3	3238.5	61.93086	1061.1	3930.7	184.6
	9	5,605.5	3283.6	60.47797	1092.7	4079.1	226.9
	10	5,595.1	3416.4	58.01632	1130.9	4118.1	248.2
	11	5,737.0	3316.6	57.88756	1169.7	4293.7	196.2
	12	5,837.0	3619.4	60.04403	1219.4	4300.2	147.6
1985	1	6,295.0	3471.9	58.44612	1309.9	4857.9	217.8
	2	6,579.8	3557.4	60.2175	1364.2	4572.5	170
	3	6,758.8	3599.8	70.84223	1417.1	4688.7	207.6
	4	6,985.4	3699.8	73.65235	1460.7	4808.1	272.1
	5	7,172.5	3639.5	75.64315	1495.3	4858.9	225
	6	7,418.5	3664.2	85.58158	1532.8	4859.2	189.1
	7	7,816.7	3635.2	93.05923	1586.2	4945.8	315.9
	8	8,099.3	3682.9	96.13993	1655.5	4919.3	282.4
	9	8,458.6	3737.8	90.24547	1721.6	5018.3	403.5
	10	8,800.7	3774.6	86.42308	1787.0	5064.3	385.7
	11	8,968.4	3711.6	90.34425	1869.5	5194.1	319.7
	12	9,299.4	3835.2	99.30865	1996.7	5299.9	716

(continued Table B.1)

1986	1	10,369.3	3929.8	103.0683	2173.3	5744.9	584.1
	2	10,746.3	3930.5	104.2414	2269.9	5747.5	535
	3	11,358.1	4214.5	111.4125	2375.4	5786.8	543.4
	4	12,056.5	4045.7	120.0722	2499.4	6114.8	797
	5	13,054.2	4107.9	120.0722	2638.3	6021.1	628.5
	6	13,495.3	4325.0	126.8887	2807.6	6135.8	717.2
	7	14,002.3	4341.7	141.7965	2947.7	6402.3	1026.3
	8	15,088.1	4217..	152.5498	3182.7	6477.9	1006.9
	9	16,202.1	4417.1	161.5177	3373.7	6449.7	1154.2
	10	17,153.6	4574.9	162.9994	3566.5	6612.5	871.8
	11	18,992.1	4767.0	154.4644	3807.5	7053.5	1104.2
	12	21,062.5	5067.3	163.495	4108.2	7551.1	629.2
1987	1	24,045.8	4677.4	156.8765	4440.9	8535.3	1950.9
	2	26,797.5	5265.4	157.3614	4761.3	8027.3	1483
	3	29,667.1	5448.9	153.4815	5076.0	8613	1512.6
	4	32,392.5	5545.0	148.2905	5520.1	9056	2233.2
	5	35,755.2	5850.8	145.2557	5936.2	9622.6	1678.8
	6	38,531.0	5530.6	145.2557	6365.7	10136.3	1961.1
	7	42,622.5	6116.6	144.4445	6881.3	9719.5	2828
	8	45,919.4	5489.1	142.2322	7443.7	10958.5	2370.7
	9	49,577.3	5952.7	141.3616	7934.1	10321.2	2188
	10	52,245.7	6255.9	141.6362	8595.2	11149.6	3454.5
	11	55,477.3	5956.2	175.4704	9277.0	12257.3	3324.9
	12	57,641.0	6441.9	225.5166	10647.2	12485	4676.5
1988	1	65,455.2	7513.3	337.4622	12293.5	14754.2	4523.3
	2	69,732.9	7689.5	334.8554	13318.5	15535.7	5095.3
	3	76,155.9	6526.6	155.2821	14000.9	15669.7	6639.4
	4	85,685.0	8881.2	90.49468	14431.9	16001.4	6756.4
	5	90,004.7	8975.7	65.49571	14711.1	18809.7	4311.5
	6	92,897.0	8739.2	49.61785	15011.2	19457.8	4187.2
	7	92,120.6	8107.3	49.45614	15261.8	19887.2	3209.2
	8	90,223.6	7728.0	50.93215	15402.2	19287.7	4196.2
	9	91,558.7	5861.7	51.8242	15490.2	18593.3	2623
	10	88,913.5	6589.0	55.92956	15608.4	17055.4	2458.1
	11	86,677.2	5602.4	64.30508	15817.3	17462.4	3352.5
	12	80,193.4	6689.2	68.16286	16147.3	18086.5	4630.2
1989	1	8,429.4	7620.7	65.68954	16542.6	20750.8	2474.8
	2	87,601.7	7027.5	63.07457	16767.1	20010.1	3375.6
	3	89,826.7	7662.4	60.92198	16948.8	20217.2	4835.6
	4	90,872.7	3699.0	64.5779	17202.3	20675.1	4623.3
	5	91,997.3	3911.0	67.39447	17439.1	17352.2	3668.9
	6	90,665.8	3982.0	75.48187	17650.9	16896.3	5633.4
	7	94,582.4	4457.0	59.73052	17827.4	17751.2	5193.8
	8	100,754.0	3516.0	41.58753	17997.3	18463.4	4896.3
	9	100,812.1	2356.0	41.01552	18169.4	16623.0	3128.9
	10	104,796.2	3480.0	46.06859	18438.1	16130.0	3164.5
	11	107,433.9	4465.0	47.61535	18696.9	17681.0	4196.2
	12	108,696.2	4152.0	49.89754	19327.9	19362.0	2131.1
1990	1	109,946.1	3652.0	50.99147	20260.7	22960.0	3554.7
	2	113,982.1	3618.0	56.89494	20719.5	19889	3902.8
	3	117,197.8	3529.0	59.12228	21084.8	19850	5353
	4	122,330.4	4428.0	55.97541	21405.7	20637	4759.6
	5	122,330.0	4095.0	44.63657	21779.2	21389	5627.9
	6	126,653.3	3054.0	41.07123	22258.9	21453	535.6
	7	128,294.0	4387.0	35.96261	22664.8	21476	2722.42
	8	133,891.7	2901.0	34.70242	23051.0	22138	2835.26
	9	133,331.0	3491.0	35.27755	23379.6	21015	3019.4
	10	133,419.0	3981.0	33.34718	23715.7	21719	3924.6
	11	135,706.8	4392.0	28.30616	24345.4	23526	3206.64
	12	141,514.9	5543.0	29.80741	25112.7	25586	2763.96
	1					31134	

TABLE B.2: SAVING ESTIMATES AND COMPONENTS

a) Current pesos (% of GDP)

	Sp/Y	Sg/Y	Sf/Y	C/Y	Yd/Y	NFS/Y	rB/Y	iF/Y	iDpr/Y	T/Y	OR/Y	inf*BM/
1980	0.177	0.082	0.013	0.651	0.828	0.004	0.003	-0.004	-0.003	0.097	0.057	-0.016
1981	0.195	0.042	0.037	0.644	0.839	0.005	0.003	0.000	0.001	0.095	0.047	-0.016
1982	0.183	-0.061	0.107	0.616	0.799	0.004	-0.034	0.064	0.030	0.081	0.042	-0.074
1983	0.136	0.185	-0.113	0.609	0.744	-0.004	-0.006	-0.018	-0.003	0.078	0.126	-0.035
1984	0.151	0.144	-0.096	0.631	0.782	-0.004	0.000	-0.014	-0.005	0.079	0.116	-0.018
1985	0.173	0.041	-0.002	0.645	0.818	-0.007	-0.004	0.047	0.019	0.080	0.097	-0.035
1986	0.148	0.018	0.017	0.682	0.829	-0.002	-0.016	0.066	0.023	0.083	0.082	-0.036
1987	0.075	0.190	-0.073	0.651	0.726	-0.006	-0.057	-0.002	0.000	0.079	0.112	-0.028
1988	0.105	0.185	-0.080	0.684	0.789	-0.005	0.050	-0.087	-0.020	0.096	0.099	-0.005
1989	0.219	0.013	-0.004	0.658	0.877	-0.004	0.060	0.014	0.001	0.101	0.095	-0.005
1990	0.101	0.100	-0.005	0.695	0.796	-0.010	0.013	-0.020	-0.001	0.114	0.086	-0.008

b) Constant 1980 pesos (% of GDP)

	Sp/Y	Sg/Y	Sf/Y	C/Y	Yd/Y	NFS/Y	rB/Y	iF/Y	iDpr/Y	T/Y	OR/Y	infBM/Y
1980	0.177	0.082	0.013	0.651	0.828	0.004	0.003	-0.004	-0.003	0.097	0.057	-0.016
1981	0.196	0.048	0.042	0.642	0.839	0.005	0.003	0.000	0.001	0.095	0.047	-0.016
1982	0.169	-0.060	0.110	0.630	0.799	0.004	-0.034	0.064	0.030	0.081	0.042	-0.074
1983	0.122	0.161	-0.116	0.623	0.744	-0.004	-0.006	-0.018	-0.003	0.078	0.126	-0.035
1984	0.161	0.121	-0.112	0.621	0.782	-0.004	0.000	-0.014	-0.005	0.079	0.116	-0.018
1985	0.191	0.020	-0.028	0.627	0.818	-0.007	-0.004	0.047	0.019	0.080	0.097	-0.035
1986	0.193	-0.011	-0.036	0.636	0.829	-0.002	-0.016	0.066	0.023	0.083	0.082	-0.036
1987	0.107	0.159	-0.112	0.619	0.726	-0.006	-0.057	-0.002	0.000	0.079	0.112	-0.028
1988	0.165	0.155	-0.149	0.623	0.789	-0.005	0.050	-0.087	-0.020	0.096	0.099	-0.005
1989	0.238	0.009	-0.072	0.639	0.877	-0.004	0.060	0.014	0.001	0.101	0.095	-0.005
1990	0.149	0.106	-0.068	0.647	0.796	-0.010	0.013	-0.020	-0.001	0.114	0.087	-0.008

Annex C: Quarterly and Monthly Private Consumption Series

In this annex we describe the sources of quarterly and monthly consumption series as well as the approach followed to identify some of their components. We also assess potential discrepancies by frequency of data.

The Bank of Mexico provides quarterly indices of GDP and demand components on a regular basis. When those indices are applied to the 1980 figures of the national accounts we obtain quarterly demand components expressed in 1980 pesos. Although the quarterly GDP obtained in this way is not the official quarterly GDP (which is provided regularly by INEGI), the demand components of GDP computed by Banco de Mexico are the only available so far.

The total quarterly private consumption index published by the Bank of Mexico is actually computed (but not published) at a fairly disaggregated level. The disaggregation is provided in Table C.1. As shown in the table, the series comprises domestically produced private consumption, imported private consumption and a small item called net foreign purchases which correct for cross border net consumption (foreigners in Mexico and Mexicans abroad), normally associated with frontier transactions not correctly detected when computing the two mayor items. Domestically produced private goods are also disaggregated into agriculture consumption, industrial consumption (durables and non-durable, where the latter is further disaggregated into food and non-food), and services. The imported private consumption series is not disaggregated further by the Bank of Mexico. Nevertheless, we have been able to separate durable and non-durable private imports by applying the share of durable imports in total consumption imports (both expressed in US dollars) to the imported consumption series in 1980 pesos. The share of durable imports in dollars is a good proxy for the share of real imported durable consumption if the relative prices in dollars have not change significantly over the period (something which is not very likely). Table C.2 provides the series of dollar imports of private consumers employed to break down the imported consumption series in Table C.1. The share of quarterly durable imports (adding the months) over total quarterly imports, is used to separate durable and non-durable imported consumption. Table C.3 provides the quarterly series of durable, non durable and services.

Comparison of Quarterly and Annual Series.

Here we compare of quarterly and annual consumption series. As mentioned in Annex A, quarterly information is likely to be more inaccurate than annual information. In order to evaluate possible mismeasurement errors at the quarterly level, we compare the annual (official) series from INEGI with the quarterly series by the Banco de Mexico. Table C.4 provides this information for the period 1980-90. We can see that in general the quarterly information does not deviate much from the official series. Although some underestimation of the consumption series is apparent in the last four years, which at most represents 3% of annual consumption in 1990. Consequently, the quarterly series of consumption from the Bank of Mexico can be used with high confidence.

Comparison of Monthly and Quarterly Consumption Series.

Although the Bank of Mexico does not produce a monthly version of its quarterly index, most of the basic information used to compute the quarterly series is available on a monthly basis. Officials in the Bank of Mexico kindly responded positively to our request for the monthly data and provided the series for consumption of domestically produced goods shown in Table C.5. To complete the series we have computed a series of imported consumption in 1980 pesos by deflating the dollar series in Table C.2 by a dollar price index of private imported goods. To separate durable and non-durable consumption we

use the same procedure described above for the quarterly information. We could not obtain a monthly version of the net foreign purchases series, but the latter represents a negligible part of the quarterly series (see Table C.1).

Table C.6 compares the monthly and quarterly series of consumption. We can see that the domestic components are very close, always within the error order of 2%. This implies that we have a fairly accurate monthly version of the domestic component of the quarterly series. Our imported proxy, however, differs substantially from the quarterly series of the Banco de Mexico. Nevertheless, imported private consumption represents a very low share of total private consumption, between 2% and 6%. In short, total consumption based on monthly data does not differ too much from the quarterly series, particularly, when we leave aside the imported component.

Unlike the quarterly series, the monthly series in the Table C.6 does not go through the process of compatibilization of demand and supply described in Annex A, and therefore is likely to be more "noisy" than the quarterly data. (This could explain the high divergence of our imported proxy.)

TABLE C1 : QUARTERLY PRIVATE CONSUMPTION SERIES
(billons $ 1980)

GOODS AND SERVICES CONSUMED IN DOMESTIC MARKET

	DOMESTIC CONSUMPTION GOODS								IMPORTED CONSUMPTION GOODS					
	INDUSTRIAL PRODUCTS													
			NON-DURABLE GOODS										NET	
YEAR	AGRI-CULT	DURAB GOOD	NO-FOODS	FOOD	TOTAL	TOTAL	SERVI-CES	TOTAL	DURAB. GOODS	NON DURAB. GOODS	TOTAL	TOTAL	FO-REING PURC	TOTAL
1980.1	257.8	277.0	539.0	772.3	1311.3	1588.3	914.8	2760.9	28.3	22.4	50.7	2811.6	-27.3	2784.
1980.2	223.4	305.2	548.3	764.7	1313.0	1618.2	913.5	2755.1	41.5	29.4	70.9	2826.0	-6.2	2819.
1980.3	253.3	291.0	564.5	776.5	1341.0	1632.0	939.4	2824.7	61.4	42.3	103.7	2928.4	15.4	2943.
1980.4	311.1	307.1	584.0	806.6	1390.6	1697.7	951.1	2959.9	71.0	58.1	129.1	3089.0	6.5	3095.
1981.1	256.4	311.8	546.2	805.3	1351.5	1663.3	956.2	2875.9	41.5	34.9	76.4	2952.3	-4.6	2947.
1981.2	231.5	333.2	573.1	815.7	1388.8	1722.0	966.8	2920.3	43.9	30.3	74.2	2994.5	18.2	3012.
1981.3	268.1	324.6	614.8	828.5	1443.3	1767.9	992.1	3028.1	71.9	30.7	102.6	3130.7	37.6	3168.
1981.4	338.4	315.1	598.4	866.3	1464.7	1779.8	994.5	3112.7	77.0	41.0	118.0	3230.7	30.7	3261.4
1982.1	295.9	313.1	586.1	843.1	1429.2	1742.3	992.3	3030.5	38.3	29.3	67.6	3098.1	-26.1	3072.0
1982.2	255.8	315.5	584.3	872.5	1456.8	1772.3	994.8	3022.9	33.8	22.4	56.2	3079.1	-17.1	3062.0
1982.3	268.5	278.3	561.1	857.5	1418.6	1696.9	1006.4	2971.8	26.9	16.5	43.4	3015.2	-22.2	2993.0
1982.4	283.8	266.8	566.8	844.0	1410.8	1677.6	994.5	2955.9	16.9	10.3	27.2	2983.1	-28.1	2955.0
1983.1	268.1	249.4	538.2	814.3	1352.5	1601.9	1006.9	2876.9	13.4	6.0	19.4	2896.3	-83.9	2812.4
1983.2	253.3	255.0	547.3	842.2	1389.5	1644.5	1008.8	2906.6	14.1	7.4	21.5	2928.1	-58.0	2870.1
1983.3	261.3	224.2	525.0	825.6	1350.6	1574.8	1024.9	2861.0	13.2	7.1	20.3	2881.3	-40.5	2840.8
1983.4	341.3	227.9	493.3	852.2	1345.5	1573.4	1026.2	2940.9	8.7	7.3	16.0	2956.9	-45.7	2911.2
1984.1	284.1	232.1	521.6	863.2	1384.8	1616.9	1027.0	2928.0	13.4	11.2	24.6	2952.6	-63.9	2888.7
1984.2	265.7	249.1	517.5	848.2	1365.7	1614.8	1017.2	2897.7	13.2	10.7	23.9	2921.6	-38.3	2883.3
1984.3	286.8	252.9	555.9	843.1	1399.0	1651.9	1029.5	2968.2	16.5	9.8	26.3	2994.5	-21.8	2972.7
1984.4	339.7	265.8	555.5	865.3	1420.8	1686.6	1034.7	3061.0	19.2	11.2	30.4	3091.4	-24.7	3066.7
1985.1	278.4	270.7	548.6	892.1	1440.7	1711.4	1040.7	3030.5	18.5	11.3	29.8	3060.3	-40.6	3019.7
1985.2	283.6	280.6	572.8	885.2	1458.0	1738.6	1042.2	3064.4	19.8	14.3	34.1	3098.5	-16.3	3082.2
1985.3	301.0	276.9	597.9	874.6	1472.5	1749.4	1046.9	3097.3	20.8	11.8	32.6	3129.9	-18.9	3111.0
1985.4	349.0	288.5	579.5	912.4	1491.9	1780.4	1031.0	3160.4	21.9	15.2	37.1	3197.5	-33.1	3164.4
1986.1	287.5	247.8	518.7	921.6	1440.3	1688.1	1034.8	3010.4	19.4	9.2	28.6	3039.0	-51.1	2987.9
1986.2	271.4	276.4	560.0	927.6	1487.6	1764.0	1042.2	3077.6	16.1	7.1	23.2	3100.8	-35.9	3064.9
1986.3	293.3	245.9	550.9	885.2	1436.1	1682.0	1052.4	3027.7	17.8	7.2	25.0	3052.7	-30.1	3022.6
1986.4	344.0	228.7	544.2	905.0	1449.2	1677.9	1037.5	3059.4	18.8	11.6	30.4	3089.8	-45.6	3044.2
1987.1	288.9	229.7	504.1	911.3	1415.4	1645.1	1045.9	2979.9	12.1	7.3	19.4	2999.3	-72.4	2926.9
1987.2	277.9	263.4	534.7	900.3	1435.0	1698.4	1048.8	3025.1	13.6	6.8	20.4	3045.5	-44.5	3001.0
1987.3	307.1	257.9	558.1	872.7	1430.8	1688.7	1068.2	3064.0	13.8	7.3	21.1	3085.1	-30.8	3054.3
1987.4	359.4	273.2	584.3	911.4	1495.7	1768.9	1065.4	3193.7	20.4	12.3	32.7	3226.4	-40.5	3185.9
1988.1	288.7	252.2	520.5	882.6	1403.1	1655.3	1066.4	3010.4	19.5	7.2	26.7	3037.1	-55.7	2981.4
1988.2	287.8	276.4	533.9	894.0	1427.9	1704.3	1059.9	3052.0	33.0	10.5	43.5	3095.5	-21.1	3074.4
1988.3	299.8	270.3	554.1	863.7	1417.8	1688.1	1074.7	3062.6	40.3	14.7	55.0	3117.6	-6.3	3111.3
1988.4	339.0	292.8	610.0	932.4	1542.4	1835.2	1075.7	3249.9	52.2	24.2	76.4	3326.3	-1.6	3324.7
1989.1	279.4	272.3	572.3	931.2	1503.5	1775.8	1087.7	3142.9	44.3	22.6	66.9	3209.8	-21.7	3188.1
1989.2	273.2	300.4	621.6	945.9	1567.5	1867.9	1091.5	3232.6	57.8	28.9	86.7	3319.3	-13.6	3305.7
1989.3	296.5	299.5	610.6	932.9	1543.5	1843.0	1113.8	3253.3	47.7	28.2	75.9	3329.2	-5.3	3323.9
1989.4	305.2	316.2	618.5	970.4	1588.9	1905.1	1118.4	3328.7	70.6	37.5	108.1	3436.8	-8.9	3427.9
1990.1	279.4	285.8	605.4	978.0	1583.4	1869.2	1127.7	3276.3	56.0	31.5	87.5	3363.8	-19.9	3343.9
1990.2	273.2	332.6	631.8	975.0	1606.8	1939.4	1130.5	3343.1	70.2	29.5	99.7	3442.8	-1.1	3441.7
1990.3	314.6	332.3	638.9	970.1	1609.0	1941.3	1157.5	3413.4	74.3	41.5	115.8	3529.2	6.3	3535.5
1990.4	323.5	348.4	679.8	1003	1682.6	2031.0	1157.5	3512.0	87.3	51.4	138.7	3650.7	12.7	3663.4

TABLE C2: IMPORTED PRIVATE CONSUMPTION GOODS
(thousand dollars)

			NON BASIC			
YEAR	MONTH	BASIC GOODS	DURABLES	NON DURABLES	TOTAL	TOTAL
1980	JAN	2256	36813	35289	72102	74358
1980	FEB	3626	46315	33945	80260	83886
1980	MAR	3447	49331	35691	85022	88469
1980	APR	4754	52184	33451	85635	90389
1980	MAY	3885	48668	37972	86640	90525
1980	JUN	3762	50216	35791	86007	89769
1980	JUL	4126	55567	37006	92573	96699
1980	AUG	4486	58908	37096	96004	100490
1980	SEP	3553	58612	45317	103929	107482
1980	OCT	5026	69703	60100	129803	134829
1980	NOV	4326	70690	51699	122389	126715
1980	DEC	5890	72997	62988	135985	141875
1981	JAN	4531	52711	49278	101989	106520
1981	FEB	4131	54522	50130	104652	108783
1981	MAR	5182	71228	50410	121638	126820
1981	APR	6053	66060	52403	118463	124516
1981	MAY	5363	70237	49700	119937	125300
1981	JUN	7452	75103	43531	118634	126086
1981	JUL	5499	77186	45878	123064	128563
1981	AUG	6853	97358	42503	139861	146714
1981	SEP	6797	128297	40935	169232	176029
1981	OCT	7505	105574	56109	161683	169188
1981	NOV	6798	79569	49598	129167	135965
1981	DEC	9327	95775	44008	139783	149110
1982	JAN	5853	58675	53554	112229	118082
1982	FEB	7058	60525	44438	104963	112021
1982	MAR	4555	62838	40871	103709	108264
1982	APR	5304	59718	40489	100207	105511
1982	MAY	3031	48382	34182	82564	85595
1982	JUN	1950	53870	32351	86221	88171
1982	JUL	2079	42055	32984	75039	77118
1982	AUG	1532	40442	21960	62402	63934
1982	SEP	1525	26282	11653	37935	39460
1982	OCT	3085	23785	13658	37443	40528
1982	NOV	1351	11713	7095	18808	20159
1982	DEC	4599	13030	8933	21963	26562

(cont. TABLE C2)

			NON BASIC			
YEAR	MONTH	BASIC GOODS	DURABLES	NON DURABLES	TOTAL	TOTAL
1983	JAN	692	8188	4782	12970	13662
1983	FEB	683	9918	3602	13520	14203
1983	MAR	1502	8299	3497	11796	13298
1983	APR	2242	7600	3212	10812	13054
1983	MAY	1347	10148	5444	15592	16939
1983	JUN	1734	12745	7258	20003	21737
1983	JUL	3048	16472	7457	23929	26977
1983	AUG	2694	12812	6166	18978	21672
1983	SEP	2728	5727	5290	11017	13745
1983	OCT	2310	9088	5376	14464	16774
1983	NOV	3138	8205	8592	16797	19935
1983	DEC	5443	10031	9077	19108	24551
1984	JAN	3056	7177	4227	11404	14460
1984	FEB	2765	9238	6727	15965	18730
1984	MAR	5526	10678	11588	22266	27792
1984	APR	4350	9784	10578	20362	24712
1984	MAY	5027	12249	7591	19840	24867
1984	JUN	5992	10845	8686	19531	25523
1984	JUL	4632	10650	6829	17479	22111
1984	AUG	5257	15432	7834	23266	28523
1984	SEP	5877	11343	7399	18742	24619
1984	OCT	6631	18480	8499	26979	33610
1984	NOV	6502	17282	11280	28562	35064
1984	DEC	7974	18703	12038	30741	38715
1985	JAN	5646	13777	7217	20994	26640
1985	FEB	9923	14222	9133	23355	33278
1985	MAR	14992	19410	12566	31976	46968
1985	APR	10844	18048	13449	31497	42341
1985	MAY	13884	19995	14182	34177	48061
1985	JUN	8246	15542	11235	26777	35023
1985	JUL	8743	20590	11491	32081	40824
1985	AUG	8732	20891	11329	32220	40952
1985	SEP	8096	19921	12144	32065	40161
1985	OCT	10417	29679	15146	44825	55242
1985	NOV	10723	25098	18013	43111	53834
1985	DEC	9652	26658	23508	50166	59818

(cont. TABLE C2)

			NON BASIC			
YEAR	MONTH	BASIC GOODS	DURABLES	NON DURABLES	TOTAL	TOTAL
1986	JAN	-3169	26858	11061	37919	34750
1986	FEB	6974	21378	11774	33152	40126
1986	MAR	5706	21299	10364	31663	37369
1986	APR	7184	25438	11903	37341	44525
1986	MAY	6190	21522	8615	30137	36327
1986	JUN	5769	20730	9361	30091	35860
1986	JUL	6722	27777	9355	37132	43854
1986	AUG	6559	17821	8150	25971	32530
1986	SEP	5282	17599	7949	25548	30830
1986	OCT	4613	21135	10807	31942	36555
1986	NOV	4136	17544	10050	27594	31730
1986	DEC	6498	19718	15146	34864	41362
1987	JAN	3007	13679	8088	21767	24774
1987	FEB	3410	15433	8505	23938	27348
1987	MAR	4383	19128	12390	31518	35901
1987	APR	3321	20439	8648	29087	32408
1987	MAY	4285	18070	9866	27936	32221
1987	JUN	3832	20219	10677	30896	34728
1987	JUL	3760	20797	11522	32319	36079
1987	AUG	4031	22977	10994	33971	38002
1987	SEP	3921	23722	12855	36577	40498
1987	OCT	6360	29071	14303	43374	49734
1987	NOV	9312	29835	17553	47388	56700
1987	DEC	12073	36451	25911	62362	74435
1988	JAN	6561	27183	11424	38607	45168
1988	FEB	7329	39764	14577	54341	61670
1988	MAR	5677	51240	17811	69051	74728
1988	APR	7987	58404	22085	80489	88476
1988	MAY	10025	71175	19439	90614	100639
1988	JUN	20860	79026	24888	103914	124774
1988	JUL	38770	70605	28199	98804	137574
1988	AUG	43126	84621	26987	111608	154734
1988	SEP	40627	74672	28495	103167	143794
1988	OCT	41626	88184	34498	122682	164308
1988	NOV	36422	116576	54099	170675	207097
1988	DEC	46061	116250	59995	176245	222306

(cont. TABLE C2)

			NON BASIC			
YEAR	MONTH	BASIC GOODS	DURABLES	NON DURABLES	TOTAL	TOTAL
1989	JAN	22833	74396	38370	112766	135599
1989	FEB	21251	83443	46982	130425	151676
1989	MAR	24809	91819	42428	134247	159056
1989	APR	26011	108300	50386	158686	184697
1989	MAY	29664	106827	52803	159630	189294
1989	JUN	31116	110822	59447	170269	201385
1989	JUL	27999	89911	53856	143767	171766
1989	AUG	29516	108746	66263	175009	204525
1989	SEP	24915	117306	66308	183614	208529
1989	OCT	34036	150132	80906	231038	265074
1989	NOV	30374	178524	85623	264147	294521
1989	DEC	32118	152687	89236	241923	274041
1990	JAN	26729	101042	60404	161446	188175
1990	FEB	25690	100592	56045	156637	182327
1990	MAR	33560	116633	62243	178876	212436
1990	APR	24907	122934	56463	179397	204304
1990	MAY	30142	142755	62155	204910	235052
1990	JUN	38248	184784	70875	255659	293907
1990	JUL	29183	155719	84472	240191	269374
1990	AUG	51876	155397	88954	244351	296227
1990	SEP	28941	152193	85360	237553	266494
1990	OCT	43195	211963	124282	336245	379440
1990	NOV	69677	223872	134247	358119	427796
1990	DEC	53210	192588	111255	303843	357053
1991	JAN	78483	145472	85324	230796	309279
1991	FEB	74775	147473	86168	233641	308416
1991	MAR	49131	154257	80416	234673	283804

TABLE C3: PRIVATE CONSUMPTION
(billions $ 1980)

YEAR	TOTAL	DURABLES	NON-DURABLES	SERVICES
1980.1	2784.3	305.29	1564.21	914.80
1980.2	2819.8	346.67	2473.13	913.50
1980.3	2943.8	352.36	2591.44	939.40
1980.4	3095.5	378.07	2717.43	951.10
1981.1	2947.7	353.33	2594.37	956.20
1981.2	3012.7	377.13	2635.57	966.80
1981.3	3168.3	396.50	2771.80	992.10
1981.4	3261.4	392.08	2869.32	994.50
1982.1	3072.0	351.45	2720.55	992.30
1982.2	3062.0	349.34	2712.66	994.80
1982.3	2993.0	305.22	2687.78	1006.40
1982.4	2955.0	283.68	2671.32	994.50
1983.1	2812.4	262.78	2549.62	1006.90
1983.2	2870.1	269.13	2600.97	1008.80
1983.3	2840.8	237.38	2603.42	1024.90
1983.4	2911.2	236.58	2674.62	1026.20
1984.1	2888.7	245.53	2643.17	1027.00
1984.2	2883.3	262.25	2621.05	1017.20
1984.3	2972.7	269.45	2703.25	1029.50
1984.4	3066.7	284.99	2781.71	1034.70
1985.1	3019.7	289.21	2730.49	1040.70
1985.2	3082.2	300.36	2781.84	1042.20
1985.3	3111.0	297.67	2813.33	1046.90
1985.4	3164.4	310.38	2854.02	1031.00
1986.1	2987.9	267.16	2720.74	1034.80
1986.2	3064.9	292.50	2772.40	1042.20
1986.3	3022.6	263.72	2758.88	1052.40
1986.4	3044.2	247.51	2796.69	1037.50
1987.1	2926.9	241.82	2685.08	1045.90
1987.2	3001.0	277.03	2723.97	1048.80
1987.3	3054.3	271.74	2782.56	1068.20
1987.4	3185.9	293.56	2892.34	1065.40
1988.1	2981.4	271.68	2709.72	1066.40
1988.2	3074.4	309.40	2765.00	1059.90
1988.3	3111.3	310.62	2800.68	1074.70
1988.4	3324.7	345.03	2979.67	1075.70
1989.1	3188.1	316.55	2871.55	1087.70
1989.2	3305.7	358.24	2947.46	1091.50
1989.3	3323.9	347.24	2976.66	1113.80
1989.4	3427.9	386.79	3041.11	1118.40
1990.1	3343.9	341.84	3002.06	1127.70
1990.2	3441.7	402.78	3038.92	1130.50
1990.3	3535.5	406.60	3128.90	1157.50
1990.4	3663.4	435.72	3227.68	1157.50

TABLE C4: COMPARISON OF ANNUAL AND QUATERLY PRIVATE CONSUMPTION SERIES
(billons $ 1980)

YEAR	ANNUAL (1)	QUARTERLY (2)	(1)/(2)
1980	2909	2910.85	0.999
1981	3123	3097.525	1.008
1982	3046	3020.5	1.008
1983	2883	2858.625	1.008
1984	2977	2952.85	1.008
1985	3083	3094.325	0.996
1986	3011	3029.9	0.994
1987	2984	3042.025	0.981
1988	3047	3122.95	0.976
1989	3220	3311.4	0.973
1990	3387	3496.125	0.969

TABLE C5: GOODS AND SERVICES CONSUMED IN DOMESTIC MARKET
(millons pesos 1980)

	INDUSTRIAL PRODUCTS							
			NON-DURABLE GOODS					
YEAR	AGRI-CULTUR	DURAB. GOODS	FOOD	NON-FOOD	TOTAL	TOTAL	SERVI-CES	TOTAL
Jan-80	230,979	273,521	786,874	533,698	1,320,572	1,594,092	912,467	2,737,538
Feb-80	211,938	268,335	772,156	536,963	1,309,119	1,577,455	914,512	2,703,905
Mar-80	330,483	297,630	771,995	562,150	1,334,145	1,631,775	917,421	2,879,679
Apr-80	233,458	292,335	764,889	531,616	1,296,505	1,588,840	911,597	2,733,895
May-80	224,306	310,911	773,880	570,459	1,344,339	1,655,249	914,323	2,793,878
Jun-80	212,436	320,694	770,570	557,346	1,327,917	1,648,611	914,580	2,775,627
Jul-80	238,903	315,671	772,904	574,888	1,347,791	1,663,463	939,504	2,841,869
Aug-80	251,663	298,738	796,873	574,463	1,371,335	1,670,073	950,131	2,871,867
Sep-80	269,334	267,620	776,415	564,046	1,340,461	1,608,081	928,565	2,805,980
Oct-80	275,778	301,885	801,971	592,865	1,394,836	1,696,721	943,606	2,916,104
Nov-80	275,778	315,549	788,603	604,054	1,392,657	1,708,206	947,727	2,931,710
Dec-80	352,770	312,795	843,479	573,817	1,417,295	1,730,090	961,968	3,044,828
Jan-81	234,000	299,820	820,704	542,327	1,363,031	1,662,851	952,439	2,849,290
Feb-81	197,017	304,431	787,957	535,924	1,323,881	1,628,312	957,900	2,783,230
Mar-81	338,182	338,501	822,694	576,270	1,398,965	1,737,466	958,261	3,033,909
Apr-81	239,606	317,428	815,947	535,925	1,351,872	1,669,300	964,221	2,873,127
May-81	230,707	341,098	811,726	594,798	1,406,524	1,747,622	962,316	2,940,644
Jun-81	224,187	348,542	834,083	604,704	1,438,788	1,787,329	973,863	2,985,380
Jul-81	265,437	355,874	822,310	622,695	1,445,005	1,800,880	992,628	3,058,944
Aug-81	271,253	324,497	839,568	633,825	1,473,393	1,797,890	1,001,966	3,071,109
Sep-81	267,610	301,845	838,926	608,316	1,447,241	1,749,086	981,706	2,998,403
Oct-81	295,427	315,184	855,519	613,799	1,469,318	1,784,502	985,572	3,065,500
Nov-81	295,427	325,221	867,683	620,013	1,487,696	1,812,917	994,558	3,102,901
Dec-81	378,494	313,431	888,009	580,569	1,468,578	1,782,009	1,003,371	3,163,874
Jan-82	266,742	294,466	855,782	571,421	1,427,203	1,721,669	990,001	2,978,411
Feb-82	264,526	293,250	813,486	572,416	1,385,902	1,679,152	982,945	2,926,623
Mar-82	356,432	357,481	870,131	635,250	1,505,381	1,862,862	1,003,954	3,223,248
Apr-82	265,289	313,601	885,815	543,559	1,429,374	1,742,975	1,001,044	3,009,308
May-82	259,655	318,104	878,839	615,798	1,494,637	1,812,741	993,120	3,065,516
Jun-82	242,456	320,929	871,143	607,698	1,478,841	1,799,769	990,236	3,032,462
Jul-82	252,367	293,404	879,999	548,945	1,428,944	1,722,348	1,014,726	2,989,441
Aug-82	266,282	283,952	838,564	629,683	1,468,248	1,752,200	1,020,172	3,038,654
Sep-82	286,850	267,410	830,892	559,360	1,390,252	1,657,662	984,302	2,928,814
Oct-82	250,610	266,614	843,952	581,055	1,425,007	1,691,621	991,892	2,934,124
Nov-82	250,610	292,898	872,238	568,433	1,440,671	1,733,569	989,037	2,973,217
Dec-82	314,410	249,829	872,238	521,205	1,393,443	1,643,272	1,002,571	2,960,253

(cont. TABLE C5)

	INDUSTRIAL PRODUCTS							
			NON-DURABLE GOODS					
YEAR	AGRI-CULTUR	DURAB. GOODS	FOOD	NON-FOOD	TOTAL	TOTAL	SERVI-CES	TOTAL
Jan-83	243,156	242,876	842,764	525,732	1,368,496	1,611,372	999,791	2,854,31
Feb-83	222,416	247,131	802,331	549,560	1,351,890	1,599,022	1,006,132	2,827,570
Mar-83	338,728	267,771	814,325	550,810	1,365,136	1,632,907	1,014,777	2,986,41
Apr-83	263,389	269,277	835,893	553,599	1,389,492	1,658,769	1,012,188	2,934,34
May-83	254,888	258,096	846,361	551,177	1,397,538	1,655,634	1,008,370	2,918,892
Jun-83	241,623	251,410	862,955	554,493	1,417,448	1,668,858	1,005,843	2,916,324
Jul-83	250,582	231,273	842,511	548,854	1,391,366	1,622,639	1,032,539	2,905,75
Aug-83	260,995	239,274	849,189	545,327	1,394,516	1,633,790	1,037,441	2,932,22
Sep-83	272,324	216,074	803,444	519,234	1,322,677	1,538,752	1,004,721	2,815,79
Oct-83	300,483	227,564	822,234	529,087	1,351,321	1,578,885	1,017,067	2,896,43
Nov-83	300,483	237,757	867,060	522,929	1,389,988	1,627,746	1,024,991	2,953,22
Dec-83	380,824	231,232	887,131	481,635	1,368,766	1,599,998	1,036,542	3,017,364
Jan-84	259,278	224,670	873,743	511,277	1,385,020	1,609,690	1,021,566	2,890,534
Feb-84	219,423	236,121	853,360	531,984	1,385,344	1,621,465	1,028,138	2,869,026
Mar-84	373,599	245,711	884,538	567,989	1,452,526	1,698,237	1,031,295	3,103,132
Apr-84	275,067	233,469	843,669	498,768	1,342,437	1,575,906	1,024,078	2,875,051
May-84	264,046	261,217	861,709	548,555	1,410,264	1,671,482	1,018,397	2,953,925
Jun-84	257,987	264,655	864,772	550,861	1,415,633	1,680,287	1,009,124	2,947,399
Jul-84	283,733	262,826	849,047	565,298	1,414,344	1,677,171	1,035,705	2,996,609
Aug-84	288,972	266,910	878,792	580,118	1,458,909	1,725,820	1,048,507	3,063,298
Sep-84	286,796	241,412	821,825	560,069	1,381,892	1,623,304	1,004,288	2,914,388
Oct-84	300,526	271,331	849,959	598,815	1,448,774	1,720,105	1,023,723	3,044,354
Nov-84	300,526	274,600	882,940	584,457	1,467,397	1,741,997	1,035,779	3,078,302
Dec-84	377,751	264,165	879,991	529,256	1,409,247	1,673,413	1,044,598	3,095,763
Jan-85	251,627	259,377	908,961	549,831	1,458,792	1,718,169	1,034,360	3,004,155
Feb-85	250,032	273,322	883,936	553,110	1,437,046	1,710,368	1,037,792	2,998,191
Mar-85	333,541	287,539	905,667	588,760	1,494,427	1,781,966	1,049,948	3,165,456
Apr-85	292,424	265,405	901,823	559,314	1,461,136	1,726,541	1,046,988	3,065,953
May-85	289,416	289,161	898,553	595,628	1,494,181	1,783,341	1,038,552	3,111,309
Jun-85	268,960	295,830	878,328	598,698	1,477,027	1,772,857	1,041,060	3,082,877
Jul-85	282,718	295,548	892,492	618,431	1,510,923	1,806,471	1,057,848	3,147,038
Aug-85	298,025	279,147	896,456	613,120	1,509,577	1,788,723	1,066,628	3,153,377
Sep-85	322,257	265,826	857,207	583,750	1,440,957	1,706,783	1,016,223	3,045,263
Oct-85	312,580	295,239	908,550	628,933	1,537,483	1,832,722	1,021,447	3,166,750
Nov-85	312,580	297,112	917,929	592,794	1,510,723	1,807,835	1,030,235	3,150,651
Dec-85	385,556	284,948	934,236	539,297	1,473,533	1,758,481	1,041,318	3,185,355

ont. TABLE C5)

	INDUSTRIAL PRODUCTS							
			NON-DURABLE GOODS					
YEAR	AGRI-CULTUR	DURAB. GOODS	FOOD	NON-FOOD	TOTAL	TOTAL	SERVI-CES	TOTAL
Jan-86	260,035	250,985	948,960	520,015	1,468,975	1,719,959	1,028,403	3,008,398
Feb-86	242,758	254,159	925,242	525,911	1,451,153	1,705,312	1,031,766	2,979,836
Mar-86	359,707	247,944	914,341	529,055	1,443,396	1,691,339	1,044,231	3,095,277
Apr-86	281,396	275,086	958,308	577,453	1,535,761	1,810,847	1,042,226	3,134,469
May-86	275,366	293,314	939,692	557,220	1,496,912	1,790,226	1,040,865	3,106,458
Jun-86	257,438	276,705	908,726	567,368	1,476,094	1,752,799	1,043,509	3,053,746
Jul-86	281,497	262,528	905,499	574,682	1,480,180	1,742,709	1,064,927	3,089,132
Aug-86	292,317	250,669	909,866	553,829	1,463,695	1,714,364	1,062,292	3,068,972
Sep-86	306,086	240,264	866,906	549,357	1,416,262	1,656,527	1,029,982	2,992,594
Oct-86	306,085	236,425	888,805	586,812	1,475,617	1,712,042	1,033,180	3,051,307
Nov-86	306,085	227,897	906,429	565,100	1,471,529	1,699,426	1,037,536	3,043,047
Dec-86	382,843	240,504	950,180	514,331	1,464,511	1,705,015	1,041,784	3,129,641
Jan-87	264,361	220,946	927,653	479,183	1,406,836	1,627,783	1,038,742	2,930,886
Feb-87	224,717	227,682	923,927	501,997	1,425,924	1,653,607	1,043,703	2,922,026
Mar-87	377,622	257,272	922,064	561,791	1,483,854	1,741,127	1,055,255	3,174,004
Apr-87	287,734	253,874	900,976	522,891	1,423,867	1,677,741	1,055,045	3,020,520
May-87	278,036	267,985	936,673	548,512	1,485,185	1,753,169	1,048,170	3,079,375
Jun-87	267,929	285,247	913,758	565,570	1,479,328	1,764,575	1,043,185	3,075,689
Jul-87	299,708	274,451	900,925	565,041	1,465,966	1,740,417	1,074,314	3,114,439
Aug-87	307,041	259,447	884,874	566,159	1,451,033	1,710,480	1,080,280	3,097,801
Sep-87	311,852	259,547	887,521	591,861	1,479,382	1,738,929	1,050,006	3,100,786
Oct-87	318,839	271,527	902,146	624,267	1,526,413	1,797,940	1,060,990	3,177,769
Nov-87	318,839	282,132	917,135	604,171	1,521,305	1,803,437	1,066,886	3,189,163
ec-87	398,816	286,073	956,077	559,349	1,515,426	1,801,499	1,068,324	3,268,639
an-88	278,700	248,426	916,282	512,897	1,429,179	1,677,605	1,059,700	3,016,005
Feb-88	253,900	259,771	885,899	542,917	1,428,816	1,688,587	1,066,100	3,008,587
Mar-88	333,500	269,166	888,464	547,949	1,436,413	1,705,579	1,073,400	3,112,479
Apr-88	291,100	270,935	918,918	545,086	1,464,004	1,734,939	1,063,600	3,089,639
May-88	302,800	286,066	922,810	534,354	1,457,164	1,743,230	1,059,000	3,105,030
un-88	269,400	295,154	897,167	573,498	1,470,665	1,765,819	1,057,100	3,092,319
Jul-88	281,700	271,557	857,310	545,526	1,402,836	1,674,393	1,078,300	3,034,393
ug-88	290,400	279,231	907,150	589,457	1,496,607	1,775,838	1,088,400	3,154,638
Sep-88	327,300	285,113	882,314	571,550	1,453,864	1,738,977	1,057,400	3,123,677
Oct-88	298,200	295,990	878,667	633,339	1,512,006	1,807,996	1,069,600	3,175,796
ov-88	344,400	312,923	971,766	651,031	1,622,797	1,935,720	1,076,000	3,356,120
ec-88	374,400	292,449	987,184	589,469	1,576,652	1,869,101	1,081,500	3,325,001

(cont. TABLE C5)

	INDUSTRIAL PRODUCTS							
			NON-DURABLE GOODS					
YEAR	AGRI-CULTUR	DURAB. GOODS	FOOD	NON-FOOD	TOTAL	TOTAL	SERVI-CES	TOTAL
Jan-89	273,000	283,647	952,895	573,309	1,526,204	1,809,850	1,085,600	3,168,450
Feb-89	288,400	278,651	930,153	591,226	1,521,379	1,800,030	1,083,700	3,172,130
Mar-89	336,700	276,076	951,641	579,126	1,530,768	1,806,843	1,093,800	3,237,343
Apr-89	272,600	292,165	965,235	622,402	1,587,637	1,879,802	1,088,100	3,240,502
May-89	280,300	306,394	962,233	619,901	1,582,134	1,888,528	1,095,500	3,264,328
Jun-89	266,700	326,969	972,839	654,219	1,627,058	1,954,027	1,090,900	3,311,627
Jul-89	288,600	303,093	945,349	611,875	1,557,224	1,860,317	1,112,300	3,261,217
Aug-89	292,800	327,026	974,843	644,506	1,619,349	1,946,375	1,128,700	3,367,875
Sep-89	308,000	295,788	952,741	615,037	1,567,778	1,863,566	1,100,400	3,271,966
Oct-89	272,700	331,343	957,420	652,940	1,610,360	1,941,703	1,109,200	3,323,603
Nov-89	307,100	338,955	1,020,094	668,128	1,688,221	2,027,177	1,118,400	3,452,677
Dec-89	335,900	308,922	989,232	572,076	1,561,307	1,870,230	1,127,600	3,333,730
Jan-90	276,500	276,464	1,026,526	594,286	1,620,813	1,897,276	1,122,800	3,296,576
Feb-90	202,500	285,035	953,904	602,280	1,556,184	1,841,219	1,127,400	3,171,119
Mar-90	361,600	318,244	1,021,953	653,209	1,675,161	1,993,405	1,132,900	3,487,905
Apr-90	289,100	295,965	983,576	595,281	1,578,857	1,874,822	1,135,100	3,299,022
May-90	289,900	348,037	1,007,554	669,229	1,676,783	2,024,820	1,130,500	3,445,220
Jun-90	288,000	376,515	1,001,641	662,015	1,663,656	2,040,172	1,125,900	3,454,072
Jul-90	316,300	349,583	987,606	654,004	1,641,610	1,991,193	1,160,500	3,467,993
Aug-90	311,800	345,243	1,018,700	674,482	1,693,182	2,038,425	1,175,200	3,525,425
Sep-90	315,700	304,983	968,382	626,065	1,594,447	1,899,431	1,136,800	3,351,931
Oct-90	285,000	363,249	1,002,755	733,421	1,736,176	2,099,425	1,147,500	3,531,925
Nov-90	325,100	365,020	1,030,468	733,946	1,764,414	2,129,435	1,153,800	3,608,335
Dec-90	360,300	349,846	1,018,610	617,546	1,636,156	1,986,002	1,171,200	3,517,502
Jan-88	278,700	248,426	916,282	512,897	1,429,179	1,677,605	1,059,700	3,016,005
Feb-88	253,900	259,771	885,899	542,917	1,428,816	1,688,587	1,066,100	3,008,587
Mar-88	333,500	269,166	888,464	547,949	1,436,413	1,705,579	1,073,400	3,112,479
Apr-88	291,100	270,935	918,918	545,086	1,464,004	1,734,939	1,063,600	3,089,639
May-88	302,800	286,066	922,810	534,354	1,457,164	1,743,230	1,059,000	3,105,030
Jun-88	269,400	295,154	897,167	573,498	1,470,665	1,765,819	1,057,500	3,092,319
Jul-88	281,700	271,557	857,310	545,526	1,402,836	1,674,393	1,078,300	3,034,393
Aug-88	290,400	279,231	907,150	589,457	1,496,607	1,775,838	1,088,400	3,154,638
Sep-88	327,300	285,113	882,314	571,550	1,453,864	1,738,977	1,057,400	3,123,677
Oct-88	298,200	295,990	878,667	633,339	1,512,006	1,807,996	1,069,600	3,175,796
Nov-88	344,400	312,923	971,766	651,031	1,622,797	1,935,720	1,076,000	3,356,120
Dec-88	374,400	292,449	987,184	589,469	1,576,652	1,869,101	1,081,500	3,325,001

TABLE C6: COMPARSION OF QUARTERLY AND MONTHLY
(millions $ 1980)

				QUARTERLY		MONTHLY			
YEAR	QUARTERLY PRIVATE CONSUM. (1)	MONTHLY PRIVATE CONSUM. (2)	(1)/(2)	DOMESTIC GOODS (4)	IMPORTED GOODS (5)	DOMESTIC GOODS (6)	IMPORTED GOODS (7)	DOMESTIC GOODS (4)/(6)	IMPORTED GOODS (5)/(7)
1980.1	2784300	2847870	0.978	2760900	50700	2773707	74163	0.995	0.684
1980.2	2819800	2847327	0.990	2755100	70900	2767800	79527	0.995	0.892
1980.3	2943800	2927077	1.006	2824700	03700	2839906	87171	0.995	1.190
1980.4	3095500	3077752	1.006	2959900	129100	2964214	113538	0.999	1.137
1981.1	2947700	2982521	0.988	2875900	76400	2888809	93712	0.996	0.815
1981.2	3012700	3034396	0.993	2920300	74200	2933050	101346	0.996	0.732
1981.3	3168300	3163609	1.001	3028100	102600	3042819	120790	0.995	0.849
1981.4	3261400	3232031	1.009	3112700	118000	3110758	121273	1.001	0.973
1982.1	3072000	3131476	0.981	3030500	67600	3042761	88715	0.996	0.762
1982.2	3062000	3108255	0.985	3022900	56200	3035762	72493	0.996	0.775
1982.3	2993000	3032603	0.987	2971800	43400	2985637	46967	0.995	0.924
1982.4	2955000	2978647	0.992	2955900	27200	2955865	22782	1.000	1.194
1983.1	2812400	2900106	0.970	2876900	19400	2889433	10673	0.996	1.818
1983.2	2870100	2936422	0.977	2906600	21500	2923187	13235	0.994	1.624
1983.3	2840800	2900374	0.979	2861000	20300	2884593	15781	0.992	1.286
1983.4	2911200	2970976	0.980	2940900	16000	2955673	15303	0.995	1.046
1984.1	2888700	2969346	0.973	2928000	24600	2954231	15116	0.991	1.627
1984.2	2883300	2943928	0.979	2897700	23900	2925458	18470	0.991	1.294
1984.3	2972700	3009849	0.988	2968200	26300	2991432	18418	0.992	1.428
1984.4	3066700	3099214	0.990	3061000	30400	3072806	26408	0.996	1.151
1985.1	3019700	3082275	0.980	3030500	29800	3055934	26341	0.992	1.131
1985.2	3082200	3117348	0.989	3064400	34100	3086713	30635	0.993	1.113
1985.3	3111000	3145012	0.989	3097300	32600	3115226	29786	0.994	1.094
1985.4	3164400	3209174	0.986	3160400	37100	3167585	41589	0.998	0.892
1986.1	2987900	3055630	0.978	3010400	28600	3027837	27793	0.994	1.029
1986.2	3064900	3127006	0.980	3077600	23200	3098224	28782	0.993	0.806
1986.3	3022600	3076448	0.982	3027700	25000	3050233	26216	0.993	0.954
1986.4	3044200	3101339	0.982	3059400	30400	3074665	26674	0.995	1.140
1987.1	2926900	3030022	0.966	2979900	19400	3008972	21050	0.990	0.922
1987.2	3001000	3081679	0.974	3025100	20400	3058528	23151	0.989	0.881
1987.3	3054300	3130883	0.976	3064000	21100	3104342	26541	0.987	0.795
1987.4	3185900	3253568	0.979	3193700	32700	3211857	41711	0.994	0.784
1988.1	2981400	3087197	0.966	3010400	26700	3045690	41507	0.988	0.643
1988.2	3074400	3166806	0.971	3052000	43500	3095663	71144	0.986	0.611
1988.3	3111300	3201706	0.972	3062600	55000	3104236	97470	0.987	0.564
1988.4	3324700	3417215	0.973	3249900	76400	3285639	131576	0.989	0.581
1989.1	3188100	3290270	0.969	3142900	66900	3192641	97629	0.984	0.685
1989.2	3305700	3397107	0.973	3232600	86700	3272152	124954	0.988	0.694
1989.3	3323900	3427339	0.970	3253300	75900	3300353	126986	0.986	0.598
1989.4	3427900	3549033	0.966	3328700	108100	3370003	179030	0.988	0.604
1990.1	3343900	3441818	0.972	3276300	87500	3318533	123285	0.987	0.710
1990.2	3441700	3554334	0.968	3343100	99700	3399438	154897	0.983	0.644
1990.3	3535500	3622916	0.976	3413400	115800	3448450	174466	0.990	0.664
1990.4	3663400	3792816	0.966	3512000	138700	3552587	240229	0.989	0.577

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